






NYC Board of Education Retirement System Investment Meeting (Public)

Schedule	Wednesday, March 15, 2023 9:30 AM — 12:30 PM EDT
Venue	Zoom Meeting
Organizer	Kim Boston


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PUBLIC AGENDA -

Welcome and Opening

Quarterly Presentation (Public):

- Market Overview
- Performance Update
- Risk Update

NON-INVESTMENT MATERIAL -
QUARTERLY PERFORMANCE
REPORTING SECTION (Public Reports):

State Street Quarterly Fund Performance Overview (Public):



New York City
Board of Education Retirement System
Performance Overview as of December 31, 2022

Total Fund Overview

New York City Board of Education Retirement System

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Through December 31, 2022

New York City Board of Education Retirement System (BERS)
Consultant's Commentary – Through December 31, 2022

Total Fund Performance

The Board of Education Retirement System (BERS) Total Fund returned +5.05% net of fees for the quarter ended December 31, 2022, versus the policy benchmark's return of +4.86%. For the fiscal year to date as of December 31, 2022, the Total Fund returned +0.70% net of fees, above the benchmark return of -0.84%.

Total Fund Asset Allocation

As of December 31, 2022, the BERS Total Fund had \$7.93 billion, up from \$7.58 billion as of September 30, 2022. For the calendar year to date period, the BERS Total Fund -12.57% lost less than the policy benchmark -13.31%.

U.S. Equity Commentary

As of December 31, 2022, U.S. Equity was \$2.28 billion or represented 28.7% of the BERS Total Fund. The U.S. equity composite was positive in the fourth quarter of 2022 returning +7.27%. This performance was above the Russell 3000 index return of +7.18%.

Active U.S. Equity Managers

Wellington returned +9.90% during the quarter, below the S&P Midcap 400 Index return of +10.78%. For the fiscal year to date as of December 31, 2022, Wellington returned +5.09% versus +8.05% for the S&P Midcap 400 Index.

- Security selection was the primary driver of relative underperformance. Weak selection in financials, information technology and communication services was partially offset by selection in health care and energy. Sector allocation, a result of the bottom-up stock selection process, also detracted from returns. Allocation effect was driven by the overweight to health care and information technology and underweight to consumer discretionary, but partially offset by the underweight to real estate.
- At the issuer level, the top two relative contributors were overweights to Axon Enterprise and Steel Dynamics, while the top two relative detractors were out of benchmark allocations to M&T Bank and Apellis Pharmaceuticals.

Wasatch returned +6.99% during the quarter, above the Russell 2000 Growth Index return of +4.13%. For the fiscal year to date as of December 31, 2022, Wasatch returned +1.12% versus +4.38% for the Russell 2000 Growth Index.

Through December 31, 2022

- From a sector perspective, the strategy's outperformance relative to the Russell 2000 Growth Index was primarily due to the stock-price strength of the holdings in health care. Conversely, the stocks in information technology (IT) and the lack of exposure to high-returning energy names detracted from relative performance.
- The strongest contributor to strategy performance during the quarter was the Altra Industrial Motion Corp. The company manufactures motion-control and power-transmission products for industrial applications. Altra's share price rocketed higher in October after the company agreed to be acquired by a larger competitor at a substantial premium to the then-current stock price.

World ex-USA Commentary

As of December 31, 2022, World ex-USA Equity was \$670.8 million (8.5% of assets) of the BERS Total Fund. World ex-USA Equity returned +14.44% in the fourth quarter of 2022 versus +16.04% for the NYC Developed Equity benchmark.

Active World ex-USA Equity Managers

Sprucegrove returned +16.11% during the quarter versus +16.18% for NYC Developed Value Benchmark. For the fiscal year to date as of December 31, 2022, Sprucegrove returned +6.13% versus +5.50% for the NYC Developed Value Benchmark.

- The portfolio continues to represent high quality value style holdings with a projected ROE of 14.5%, which is higher than the World ex-USA Index at 11.0%. The portfolio has a normalized P/E ratio of 12.9x, less than the 14.6x for the Index. These characteristics are consistent with the historical profile of the manager. The manager believes the portfolio is attractively valued compared to the market. The strategy is well diversified across sectors and geographies, a residual from bottom-up selection.
- The U.K. was the largest country exposure in the strategy at 17.9%, followed by Japan at 12.7%. Exposure to Emerging Markets was 13.8% and cash was 3.4% at quarter end.
- Over the quarter, the relative outperformance was due to stock selection in Switzerland (Richemont and Holcim) and Hong Kong (AIA Group and Xinyi Glass Holdings). An underweight position in Canada and an overweight position in Germany also contributed to positive relative performance. Outperformance was partially offset by negative relative performance due to exposure to Emerging Markets, and stock selection in Japan (Kubota and Omron). Underweight positions in France and Denmark also contributed to negative relative performance.
- The top 10 holdings represent 24.1% of the portfolio.

Through December 31, 2022

Baillie Gifford returned +11.70% in the quarter versus +16.18% for NYC Developed Growth Benchmark. For the fiscal year to date as of December 31, 2022, Baillie Gifford returned +1.55% versus +5.50% for the NYC Developed Growth Benchmark.

- ASML, a semiconductor equipment manufacturer, was the portfolio's largest holding at 7.1%.
- At quarter end, the portfolio had 12.2% invested in Emerging Markets.
- The top 10 holdings represent 43.1% of the portfolio.

Acadian performed below the index for the quarter, +16.77% versus +17.12% for the S&P EPAC Small Cap Index. For the fiscal year to date as of December 31, 2022, Acadian returned +5.59% versus +3.80% for the S&P EPAC Small Cap Index.

- The top allocation by country was Japan with 20.4%, followed by Australia (13.0%), and United Kingdom (9.8%).
- The portfolio had a P/E of 7.6x while the benchmark had a P/E of 14.8x.
- At quarter end, the portfolio's emerging markets exposure was 8.7%.
- The portfolio held 917 stocks.

Alger outperformed for the quarter, +17.22% versus +15.79 for the MSCI EAFE Small Cap Index. For the fiscal year to date as of December 31, 2022, Alger returned +6.31% versus +4.41% for the MSCI EAFE Small Cap Index.

- Relative Value exposures were a positive contributor to relative performance for the quarter as well as the trailing one-year period. The significant rotation out of expensive, growth-oriented stocks led many Relative Value insights to hold up well during much of the year. Insights assessing the relative pricing of various fundamental measures including several profit measures performed particularly well during the quarter. Within Europe, Relative Value insights were positive for the quarter, recouping earlier losses, and resulting in a positive contribution for the full year. Within Japan, Value related insights were relatively flat for the quarter however produced the highest returns for the full year. Within Asiaex Japan, insights were slightly negative for the quarter and trailing one year.
- Quality exposures were the best performing investment theme for the quarter and trailing one-year period. 2022 results do however mask some meaningful volatility during the year as markets experienced several periods of "Risk on" sentiment which is typically a headwind for most Quality related insights. In terms of regional performance, Quality insights performed well in Europe and to a lesser degree in Japan. Companies with resilient profit margins and asset efficiency tend to perform well on a relative basis in more inflationary environments and as such fared well during the quarter and the full year.
- The portfolio held 193 stocks compared to MSCI EAFE Small Cap of 2,271 stocks.

Through December 31, 2022

Emerging Markets Equity Commentary

As of December 31, 2022, Emerging Markets Equity was \$399.4 million or represented 5.0% of the BERS Total Fund. Emerging Markets returned +11.82% for the quarter versus +9.70% for the MSCI Emerging Markets, Net Index.

Emerging Markets Equity Managers

Acadian returned +11.83% for the quarter versus +9.70% for the MSCI Emerging Markets, Net Index. For the fiscal year to date as of December 31, 2022, Acadian returned -3.18% versus -2.99% for the MSCI Emerging Markets, Net Index.

- The portfolio had a P/E of 6.4x, while the benchmark had a P/E of 12.4x.
- At quarter end, the portfolio held 578 stocks and the benchmark held 1,377.
- The top allocation by country was China with 36.6% followed by Taiwan (12.2%) and South Korea (12.1%).

CONY GT EM BlackRock returned +10.22% versus +9.70% for the MSCI Emerging Markets, Net Index during the quarter. For the fiscal year to date as of December 31, 2022, CONY GT EM BlackRock returned -2.85% versus -2.99% for the MSCI Emerging Markets, Net Index.

- Emerging markets equities rose over the quarter, supported by a weaker U.S. dollar and China's relaxation of its zero Covid policy. Optimism surged in October and November 2022 on hopes that tightening from the Federal Reserve (Fed) would slow down. The meeting between U.S. and China presidents during the G20 summit in Indonesia signaled an ease of geopolitical tension and boosted market sentiment. Markets welcomed China's relaxation of its Covid restrictions for the first time since 2020. Expectations that Chinese demand would surge as they re-opened their economy, and the announcement of authorities to support the housing sector boosted investor confidence over quarter.
- Emerging market net oil exporters underperformed their emerging markets peers despite lower energy prices. Turkey was the best emerging market country performer during the quarter supported by loosened monetary policy, despite high inflation rate.
- From a sector perspective, Communication Services (+13.79%), Health Care (+13.11%), and Industrials (+12.49%) were among the best performers. While Consumer Staples (+6.63%), Utilities (+4.61%), and Energy (+4.30%) were among the worst performers.



Through December 31, 2022

JP Morgan returned +11.85% versus +9.70% for the MSCI Emerging Markets, Net Index during the quarter. For the fiscal year to date as of December 31, 2022, JP Morgan returned -0.64% versus -2.99% for the MSCI Emerging Markets, Net Index.

- Stock selection in China proved to be a tailwind to performance as it abandoned its strict zero-COVID policy. Contribution came from across a wide array of sectors, with names seen as benefitting from a recovery in pent-up consumer demand, including AIA, and Shenzhou International, were key contributors. Clearly, concerns remain about the impact on short-term demand as COVID cases rise, but with the uncertainty around strict COVID controls now removed investors can now start to focus on medium term economic recovery.
- The portfolio's holding in Regional SAB DE CV contributed to returns during the quarter. Regional offers deposits, e-banking, loans and other banking services to customers in Mexico. The shares rose after the company announced results which exceeded expectations with better NIMs, lower provisioning and contained costs. Investors were also buoyed by an upbeat outlook for loan growth, strong deposit growth and prospects for the SME sector on expectations that "nearshoring" will benefit its customer base.

Global Equity Managers

Morgan Stanley returned +5.25% versus +9.76% for the MSCI AC World Index, during the quarter. For the fiscal year to date as of December 31, 2022, Morgan Stanley underperformed returning +1.88% versus +2.28% for the MSCI AC World Index.

- A sector overweight allocation to consumer discretionary and stock selection in industrials and communication services were the greatest overall detractors from the relative performance of the portfolio during the period. Underweight allocations to energy and health care also contributed negatively. Top individual detractors included shares of online retail and cloud computing leader Amazon, Korean ecommerce platform Coupang, mobility platform Uber Technologies, social network Meta Platforms and entertainment leader Walt Disney.
- Stock selection in information technology and consumer discretionary and a sector overweight allocation to industrials were the greatest overall contributors to relative performance. Top individual contributors included shares of Danish transportation and logistics firm DSV A/S, luxury brand Moncler SpA, Indian financial HDFC Bank Ltd., Canadian ecommerce solution Shopify and French luxury brand Hermès.

Fiera returned +12.33% versus +9.77% for the MSCI World Index, during the quarter. For the fiscal year to date as of December 31, 2022, Fiera returned +5.18% versus +2.97% for the MSCI World Index.

- Among the largest contributors over the quarter was TJX. Strong margin execution drove the stock's outperformance even though the company is experiencing freight costs headwinds. The company furthermore is continuing to benefit from strong merchandise availability as supply chain disruptions have increased their selection from suppliers, while the inflationary environment has enabled the off price retailer to strategically increase its pricing.

Through December 31, 2022

• Among the most significant detractors over the quarter were Alphabet and Roche. Alphabet's stock underperformed as the company reported results that came in below expectations and negatively revised earnings. The US based multinational tech giant continues to be faced with short term macro challenges and FX headwinds. The company remains committed to spending on innovation throughout the market cycle, while at the same time have not meaningfully slowed down hirings, staying focused on the business long term, despite the impact being negative on margins short term. As for Roche, the company's pharmaceutical division reported results that came in below consensus, while the beat in diagnostics was partially driven by better than anticipated covid testing revenue. Furthermore, the company announced that its experimental Alzheimer's drug, Gantenerumab failed in phase 3 of its trial, proving to not be significant, leading Roche to terminate its program.

Fixed Income – Structured Manager Composite Commentary

As of December 31, 2022, the Total Structured Portfolio was \$971.7 Million or 12.3% of the BERS Total Fund. Structured Fixed Income returned +1.54% in the fourth quarter versus +1.88% for the benchmark. For the fiscal year to date as of December 31, 2022, Structured Fixed Income returned -2.95% versus -3.09% for the benchmark.

Fixed Income – Structured Manager Composite Managers

BlackRock (mortgages) returned +1.55% in the quarter versus the NYC Custom Mortgage Benchmark return of +2.14%. For the fiscal year to date as of December 31, 2022, BlackRock (mortgages) returned -3.50% versus -3.32% for the NYC Custom Mortgage Benchmark.

- Active duration positioning where the fund pivoted from modestly positive to flat detracted performance in October as rates sold off sharply on the back of disappointing inflation data. However, this constructive stance on duration paid off in November and December as rates rallied into the end of the year, catalyzed by more encouraging inflation print which eased pressure from the Fed to impose significantly more rate hikes.
- Relative value trades performed well throughout the quarter, with performance especially notable in November and December. This was primarily driven by overweight in specified pools versus TBAs as well as down in coupon expressions via short FN 4.0/3.0 and short FN 5.5/4.5; these positive performances can be attributed to factors including inflows to indexed MBS mandates (low coupons make up a majority of the index) and down-in-coupon tilt as higher coupons became vulnerable to prepayment into a large enough rate rally.



Through December 31, 2022

T. Rowe Price returned +3.24% in the quarter versus the Bloomberg U.S. Corporate Investment Grade Index return of +3.63%. For the fiscal year to date as of December 31, 2022, T. Rowe Price returned -2.09% versus -1.61% for the Bloomberg U.S. Corporate Investment Grade Index.

- In the fourth quarter, credit selection within the energy sector hindered relative performance. Midstream energy names lagged their exploration and production peers as the abrupt economic reopening of China bolstered energy demand expectations. Holdings in some midstream energy companies, including Cheniere Corpus Christi and Sabine Pass Liquefaction underperformed.
- Security selection within consumer cyclicals helped relative performance. A credit issued by Aptiv was a notable outperformer after reporting strong third-quarter earnings alongside a rebound in global vehicle production.

SSgA LI Treasury (governments) returned -0.94% in the quarter versus the +0.02% return for the NYC - Treasury Agency Plus Five. For the fiscal year to date as of December 31, 2022, SSgA (governments) returned -7.87% versus the -7.25% for the NYC - Treasury Agency Plus Five.

- In the fourth quarter of 2022, yields across the spectrum were wider with the exception of the 5y treasury yields which contracted by 9bp to 4.01%. the shorter end 2yr saw yields rise by 15bp in 4Q22 driven primarily by the Fed's caution in December. The 10yr and 30yr widened during the quarter by 4bp and 19bp respectively. Corporate bonds enjoyed some respite during the quarter as the OAS of the Bloomberg US Aggregate Corporate Index tightened by 29 bps (q/q) to 1.30%.

SSGA 1-10 Yr. Treasury/ Agency returned +0.88% in the quarter versus the +0.87% return for the USBIG Treasury/ Agency 1- 10 Yr. Index. For the fiscal year to date as of December 31, 2022, the SSgA 1-10 Yr. Treasury Index returned -2.21% versus the -2.31% for the USBIG Treasury/Agency 1-10Yr. Index.

SSgA 1 -3 Yr. Treasury Index returned +0.70% in the quarter, slight above the FTSE USBIG Treasury 1 -3 Yr. Index return of +0.69%. For the fiscal year to date as of December 31, 2022, the SSgA 1-3 Yr. Treasury Index returned -0.80%, above the FTSE USBIG Treasury 1 -3 Yr. Index return of -0.88%.

SSGA LT Treasury 10Y Plus returned -1.40% in the quarter versus the FTSE Treasury 10+ return of -1.24%. For the fiscal year to date as of December 31, 2022, the SSgA LT Treasury 10Y Plus returned -11.07% above the FTSE Treasury 10+ return of -11.39%.



Through December 31, 2022

Enhanced Yield Fixed Income & Bank Loans Commentary

As of December 31, 2022, Enhanced Yield Fixed Income was \$717.7 million or 9.1% of the BERS Total Fund.

Mackay Shields returned +4.18% in the quarter versus +4.17% for Bloomberg U.S. High Yield – 2% Issuer Cap Index. For the fiscal year to date as of December 31, 2022, Mackay Shields returned +3.56% versus +3.50% for the Bloomberg US High Yield – 2% Issuer Cap Index.

- During the quarter, selection in the Specialty Retail sector contributed to relative returns for both the quarter and the year. The portfolio did not own Carvana and Bed, Bath & Beyond, both of which declined significantly in price. Media Content selection was positive as well for the quarter and the year as the portfolio did not own Diamond Sports Group and AMC Networks. An underweight to CableVision aided returns in Cable & Satellite TV.
- Energy positioning was slightly negative for the quarter but was the largest contributor for returns during the year. A focus on Natural Gas companies and an underweight to larger fallen angel capital structures was beneficial for performance.

Nomura returned +4.61% in the quarter versus +4.17% for Bloomberg U.S. High Yield – 2% Issuer Cap Index. For the fiscal year to date as of December 31, 2022, Nomura returned +4.06% versus +3.50% for the Bloomberg US High Yield – 2% Issuer Cap Index.

- In the fourth quarter of 2022 the top sector contributors to the portfolio's relative performance included Oil Field Equipment & Services, Gaming, and Cable & Satellite TV. Oil Field Service companies have benefitted from the generally strong commodity pricing environment during the year, and were insulated from falling gas prices in Q4 by robust contract backlogs and resilient demand. In the Gaming sector, holdings in Macau gaming contributed, as the Macau government awarded new 10-year gaming concessions, and the market anticipated accelerating reopening in China. In Cable & Satellite TV, the portfolio benefitted from investments in longer-duration, higher quality names like Charter. Additionally, In Support Services, Ahern was acquired by United Rentals, and the bonds were taken out at their par call price as part of the transaction.
- Key sector detractors for the quarter included Theaters & Entertainment and Wireless Telecom. In Theaters, AMC Entertainment reported higher-than-expected cash burn amid disappointing box office numbers. In Wireless, Digicel contended with severe unrest in Haiti and faces near-term refinancing risk, but the company reported results in line with expectations and guidance.



Through December 31, 2022

TIPS, ETI, Cash Commentary

As of December 31, 2022, Fixed Income – TIPS, ETI and Cash was \$408.96 million or 5.2% of the NYBERS Total Fund.

Fixed Income – TIPS Manager

SSgA (TIPS) returned +1.93% in the quarter, below the +2.04% return for the Bloomberg Global Inflation Linked Index. For the fiscal year to date as of December 31, 2022, SSgA (TIPS) returned -3.35% versus the -3.21% return for the Bloomberg Global Inflation Linked Index.

Fixed Income – Core Manager

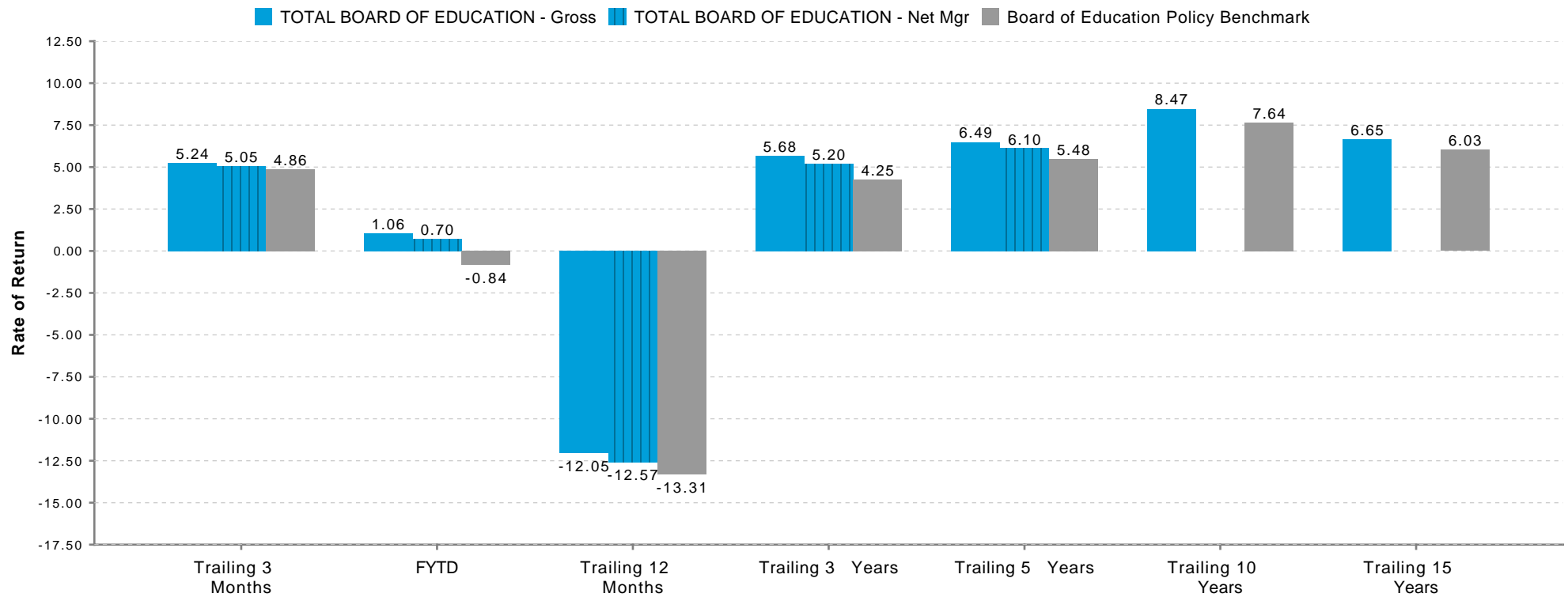
Pugh returned +1.86% in the quarter, versus the +1.87% return for Bloomberg U.S. Aggregate Index. For the fiscal year to date as of December 31, 2022, Pugh returned -2.72% versus the -2.97% return for the Bloomberg U.S. Aggregate.

- Modestly short duration positioning benefitted performance as interest rates increased throughout the year. Curve positioning was accretive to performance as well. An underweight to MBS and security selection within ABS added to performance, partially offset by CMBS as all spread sectors generated negative excess returns. An overweight allocation to Corporates and a focus on lower quality securities negatively impacted performance.
- The overweight to Corporates, particularly to the lower-rated BBB, Crossover, and BB securities, drove the outperformance. This was slightly offset by a negative contribution from the overweight to ABS. Portfolio duration was neutral to performance in the quarter. Duration at year end was 6.14, in line with the Index duration of 6.12.

TOTAL BOARD OF EDUCATION

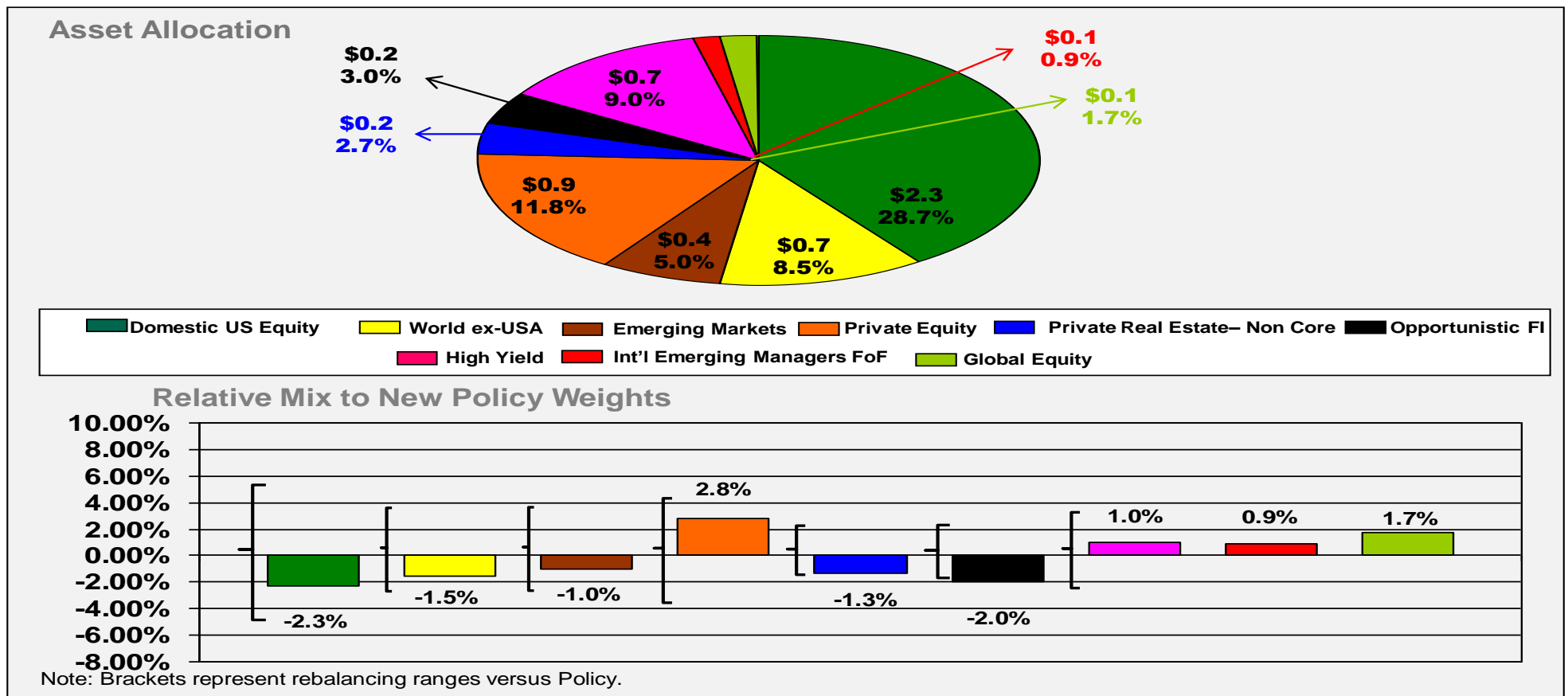
Market Value (Billions)

\$7.9

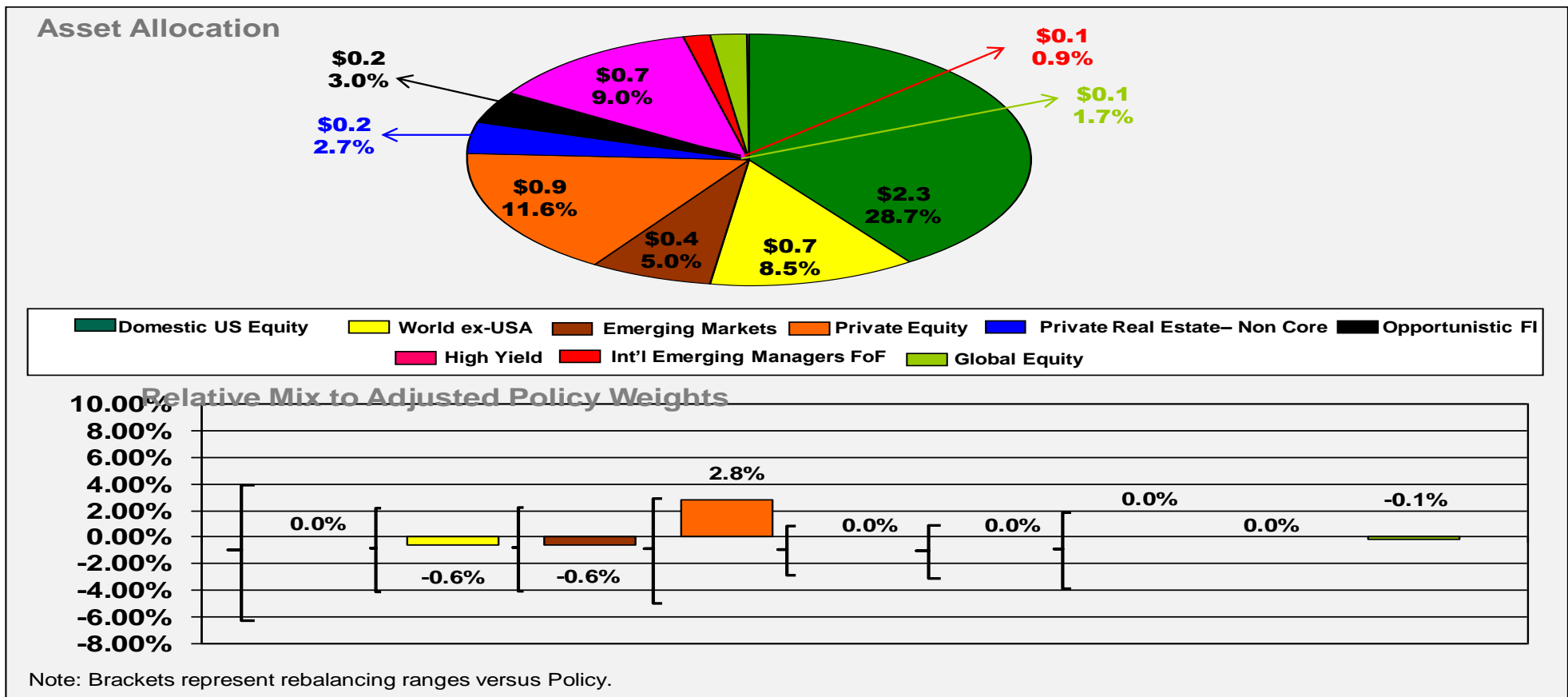


	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation						
TOTAL BOARD OF EDUCATION	11.8	12.3	6.5	10.6	8.7	8.7

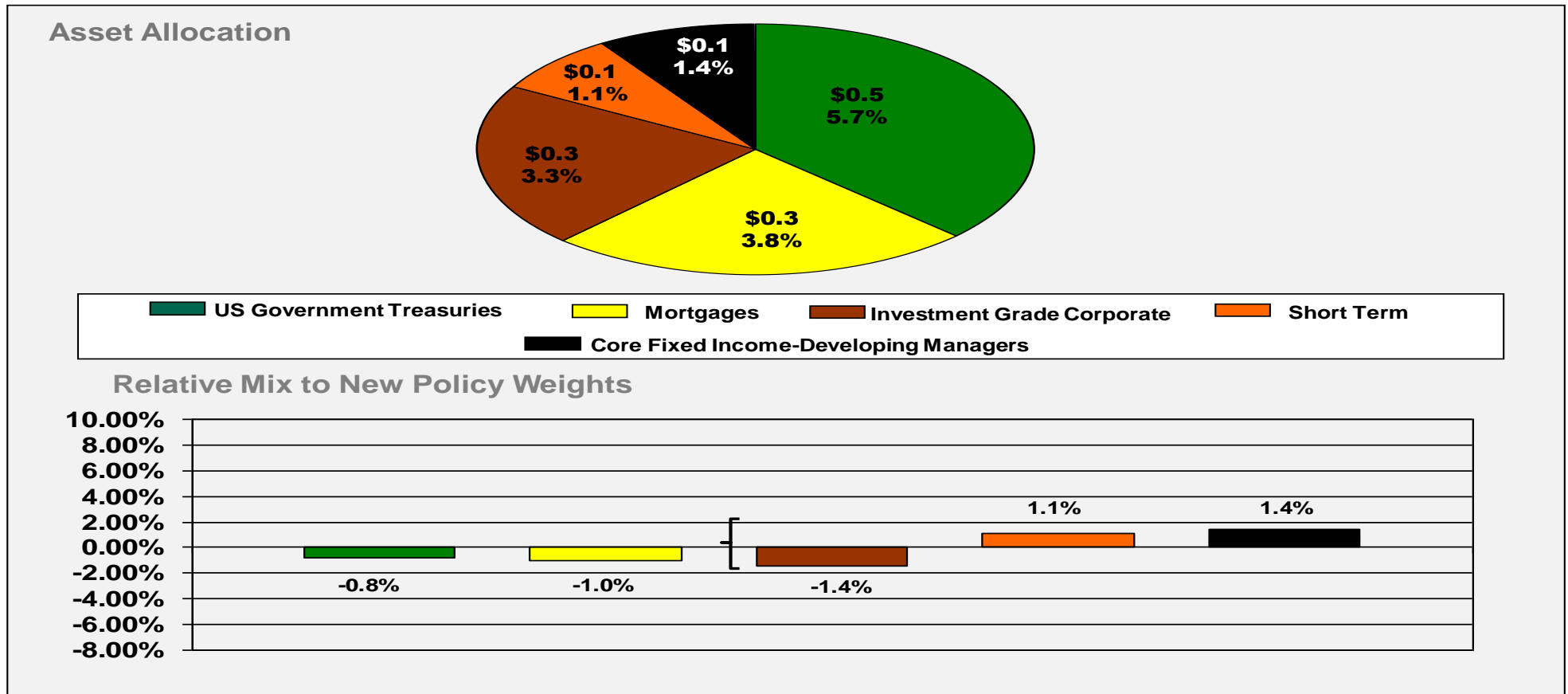
Portfolio Asset Allocation – Growth



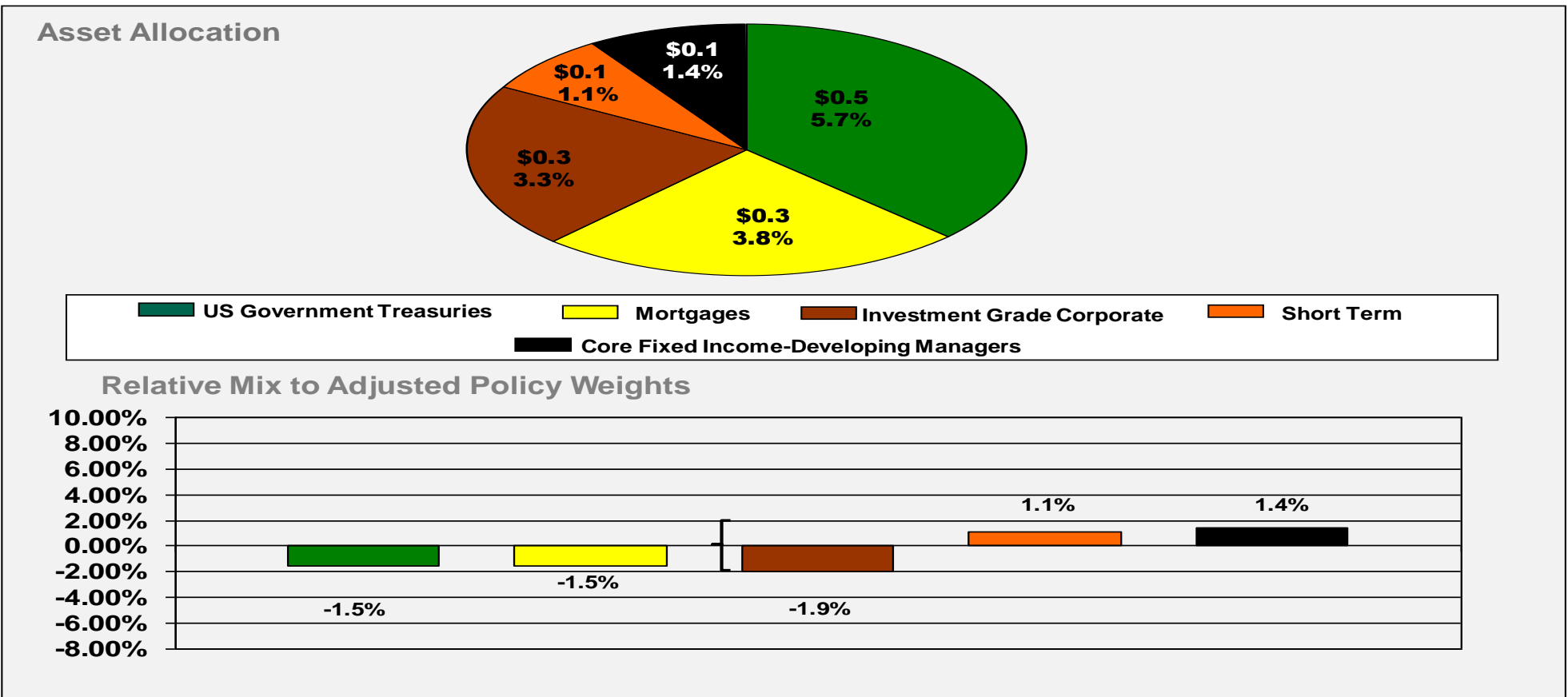
Portfolio Asset Allocation – Growth



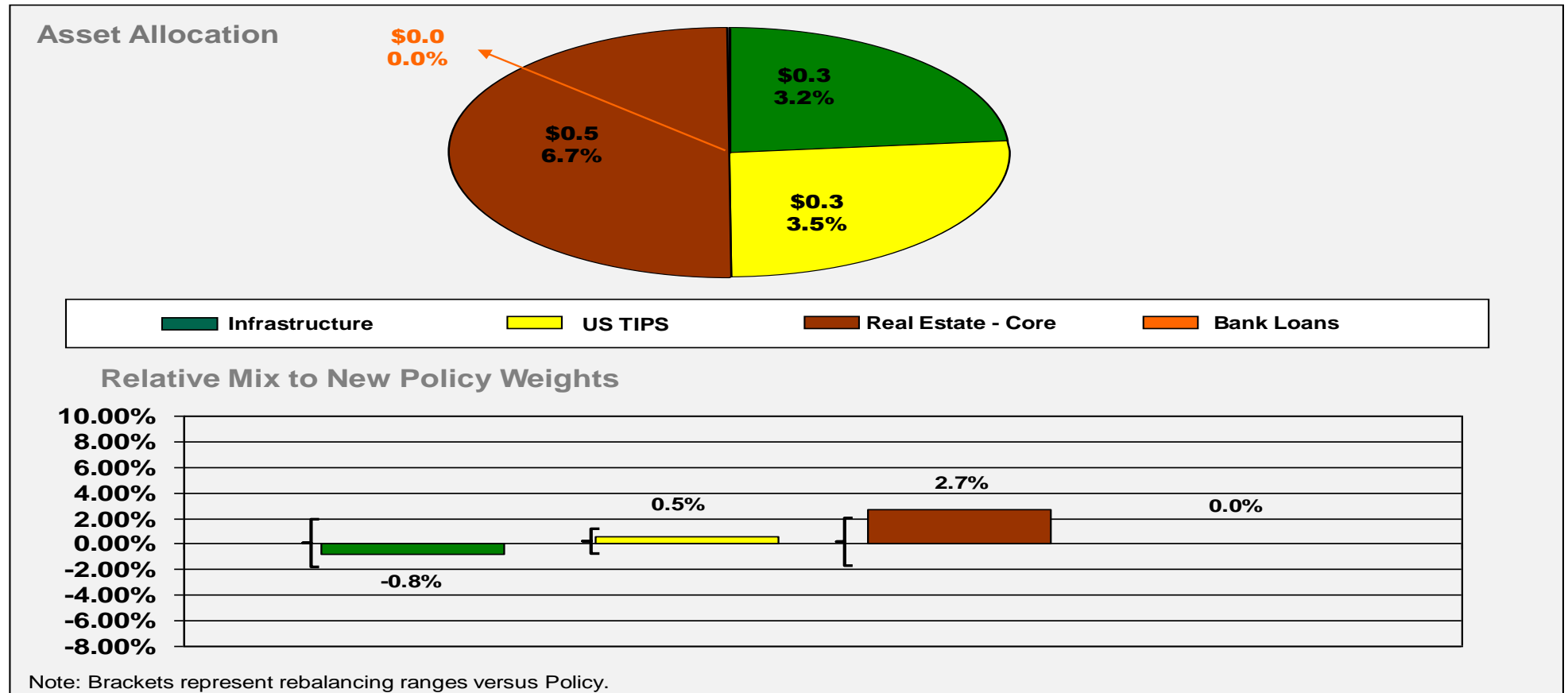
Portfolio Asset Allocation – Deflation Protection



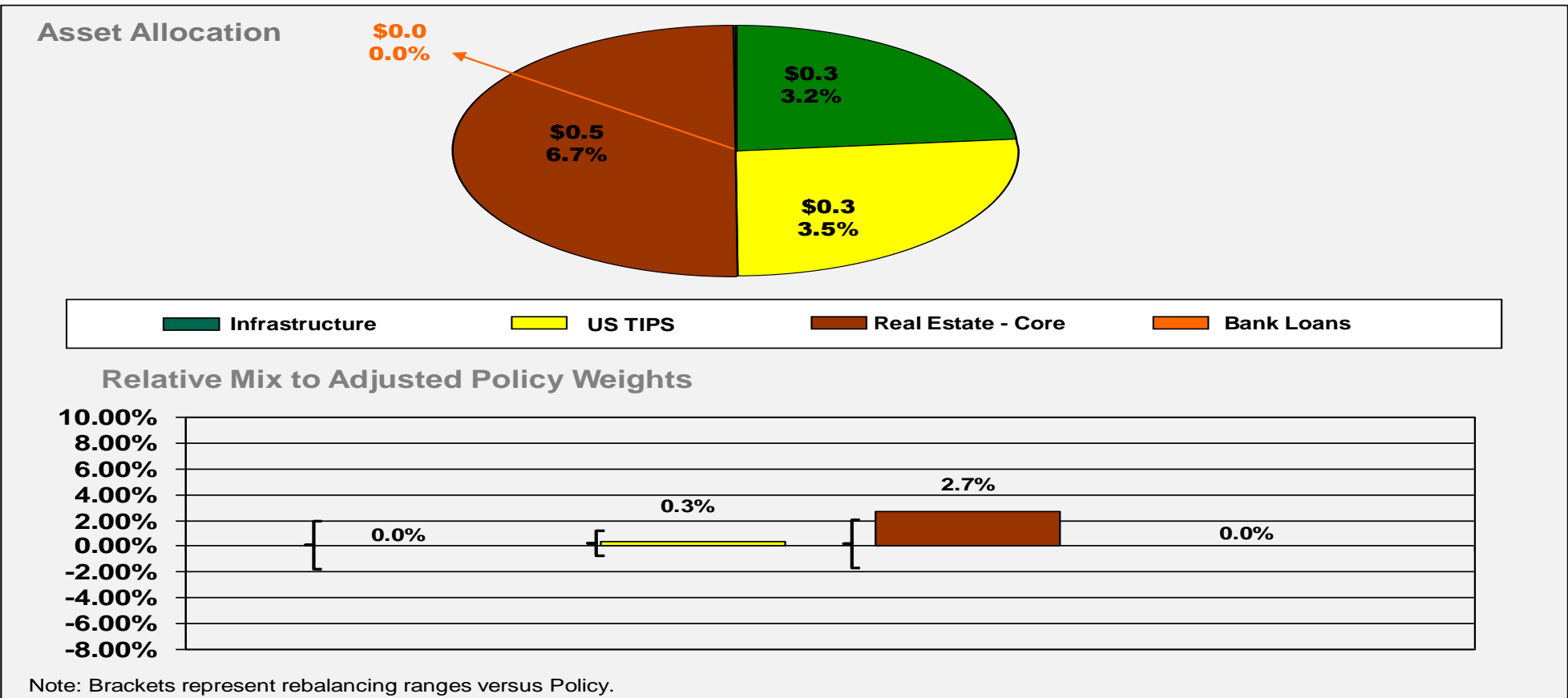
Portfolio Asset Allocation – Deflation Protection

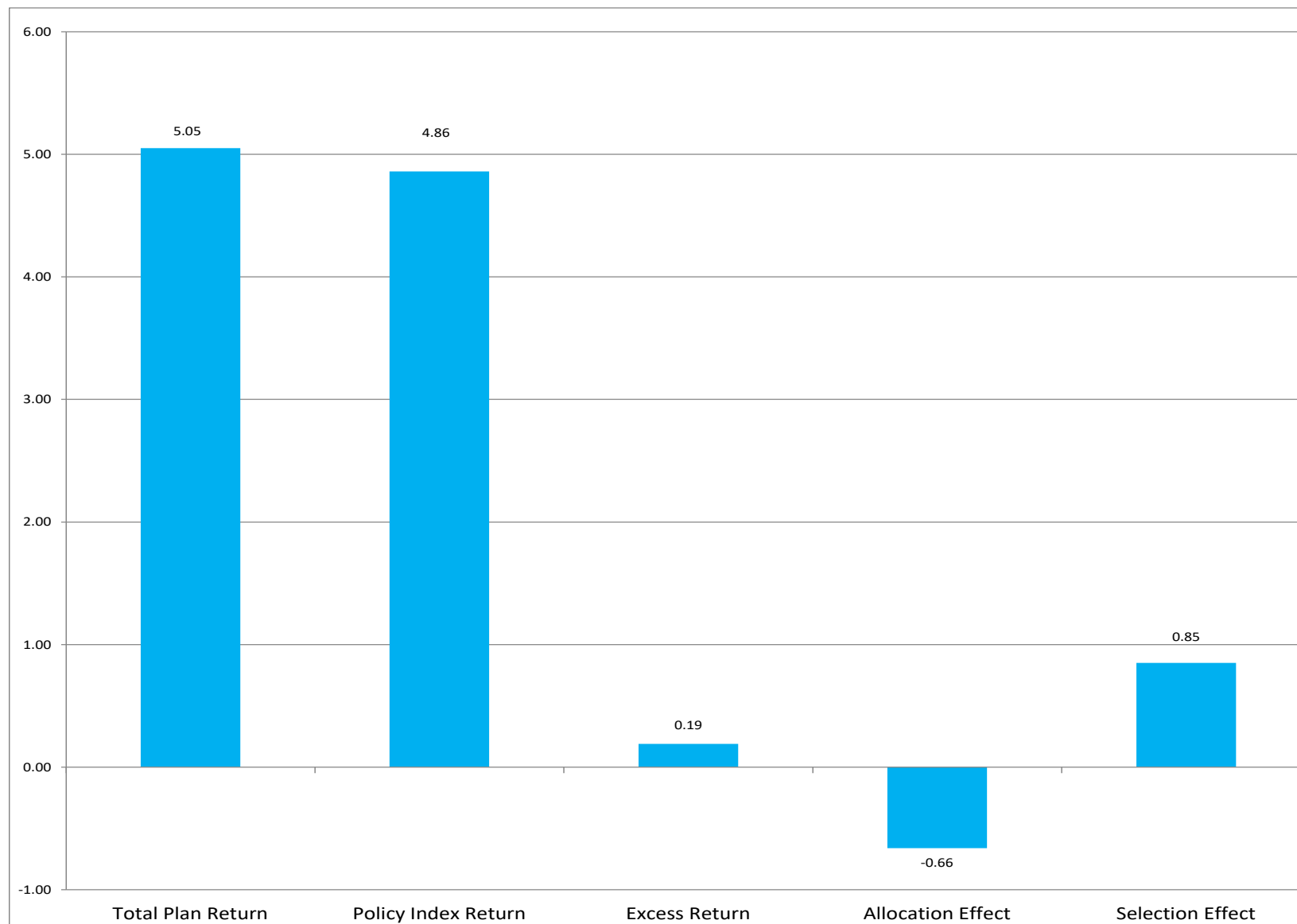


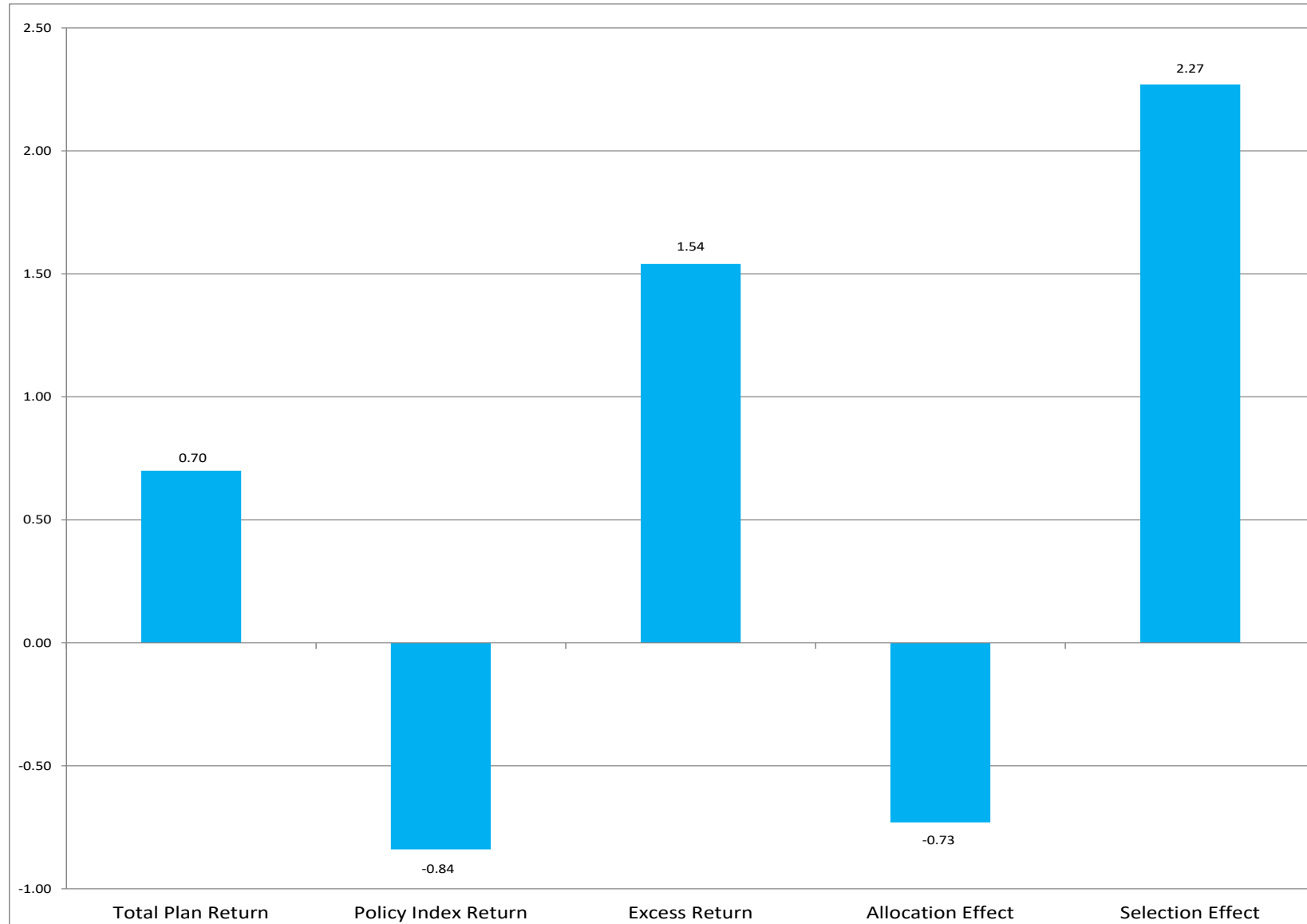
Portfolio Asset Allocation – Inflation Protection

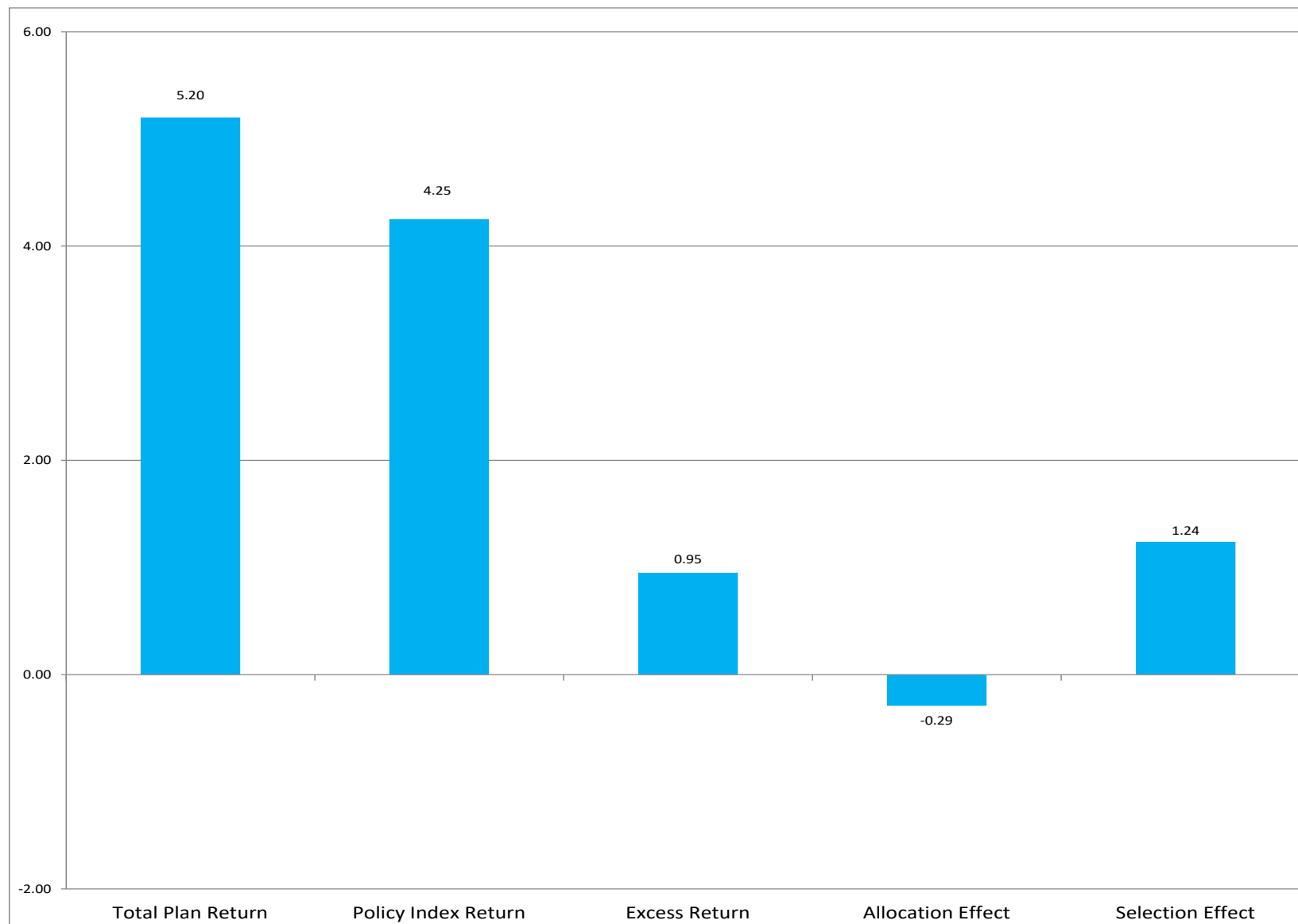


Portfolio Asset Allocation – Inflation Protection







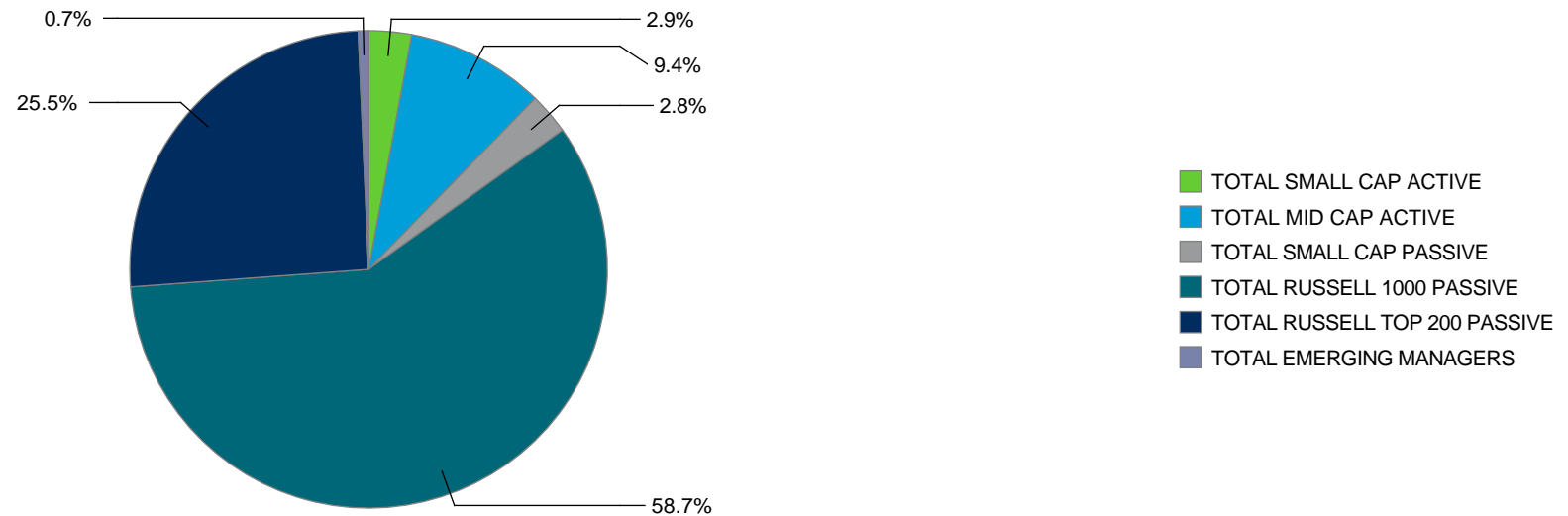


Allocation Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL BOARD OF EDUCATION	-0.66	-0.73	-0.29	Board of Education Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.05	-0.09	-0.11	RUSSELL 3000 (DAILY)
TOTAL WORLD ex-USA	-0.08	-0.05	-0.01	NYC Developed Equity Benchmark
TOTAL GLOBAL EQUITY	-0.01	-0.01	0.00	MSCI AC WORLD (Daily Const)
TOTAL EMERGING MARKETS	-0.07	-0.03	-0.01	MSCI EMERGING MARKETS
TOTAL INTERNATIONAL FOF	0.00	0.00	0.00	MSCI ACWI ex USA IMI Net
TOTAL PRIVATE EQUITY	-0.20	-0.49	-0.15	NYC R3000 +3% Lagged
TOTAL PRIVATE REAL ESTATE - CORE	-0.29	-0.12	0.01	NCREIF ODCE NET
TOTAL PRIVATE REAL ESTATE NON-CORE	0.00	0.00	0.00	NCREIF ODCE NET +200
TOTAL INFRASTRUCTURE	0.00	0.01	0.00	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.02	0.01	-0.06	FTSE US Government Bond 1-3 Years Index
TOTAL US TREASURY INTERMEDIATE	0.02	0.03	0.00	USBIG TSY AGN 1-10
TOTAL ACTIVE GOVERNMENT	0.04	0.05	0.03	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.01	0.03	0.01	FTSE US Government Bond 10+ Years Index
TOTAL IG CORPORATE	-0.01	-0.02	0.14	NYC Custom IGC Benchmark
TOTAL MORTGAGE	0.03	0.02	0.08	NYC Custom Mortgage Benchmark
TOTAL CORE FI- DEVELOPING MGRS	-0.04	-0.03	-0.14	Bloomberg U.S. Aggregate
TOTAL ETI	0.00	0.00	0.00	BERS Custom Benchmark (No Cash)
TOTAL HIGH YIELD	-0.01	-0.03	0.12	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.01	CSFB LEVERAGED LOAN INDEX
TOTAL TIPS MANAGERS	-0.01	-0.01	-0.02	Bloomberg Global Infl-Linked: U.S. TIPS
TOTAL OPPORTUNISTIC FIXED	0.00	0.00	0.00	Opportunistic Fixed Income JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	-0.01	0.01	-0.16	

Selection Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL BOARD OF EDUCATION	0.85	2.27	1.24	Board of Education Policy Benchmark
TOTAL DOMESTIC EQUITY	0.02	-0.07	-0.14	RUSSELL 3000 (DAILY)
TOTAL WORLD ex-USA	-0.12	-0.09	0.16	NYC Developed Equity Benchmark
TOTAL GLOBAL EQUITY	-0.01	0.02	-0.02	MSCI AC WORLD (Daily Const)
TOTAL EMERGING MARKETS	0.09	0.02	-0.09	MSCI EMERGING MARKETS
TOTAL INTERNATIONAL FOF	0.00	0.00	0.01	MSCI ACWI ex USA IMI Net
TOTAL PRIVATE EQUITY	0.39	1.88	0.94	NYC R3000 +3% Lagged
TOTAL PRIVATE REAL ESTATE - CORE	0.40	0.56	0.21	NCREIF ODCE NET
TOTAL PRIVATE REAL ESTATE NON-CORE	0.20	0.12	0.01	NCREIF ODCE NET +200
TOTAL INFRASTRUCTURE	0.01	-0.04	0.04	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.00	0.00	0.00	FTSE US Government Bond 1-3 Years Index
TOTAL US TREASURY INTERMEDIATE	0.00	0.00	0.00	USBIG TSY AGN 1-10
TOTAL ACTIVE GOVERNMENT	-0.01	-0.01	-0.01	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.00	0.00	0.00	FTSE US Government Bond 10+ Years Index
TOTAL IG CORPORATE	-0.02	-0.02	-0.02	NYC Custom IGC Benchmark
TOTAL MORTGAGE	-0.02	-0.01	0.01	NYC Custom Mortgage Benchmark
TOTAL CORE FI- DEVELOPING MGRS	0.00	0.00	0.01	Bloomberg U.S. Aggregate
TOTAL ETI	0.00	0.00	0.00	BERS Custom Benchmark (No Cash)
TOTAL HIGH YIELD	0.02	0.03	0.09	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.01	CSFB LEVERAGED LOAN INDEX
TOTAL TIPS MANAGERS	0.00	-0.01	0.00	Bloomberg Global Infl-Linked: U.S. TIPS
TOTAL OPPORTUNISTIC FIXED	-0.09	-0.13	0.04	Opportunistic Fixed Income JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	0.00	0.00	0.01	

Total Domestic Equity Asset Allocations: December 31, 2022

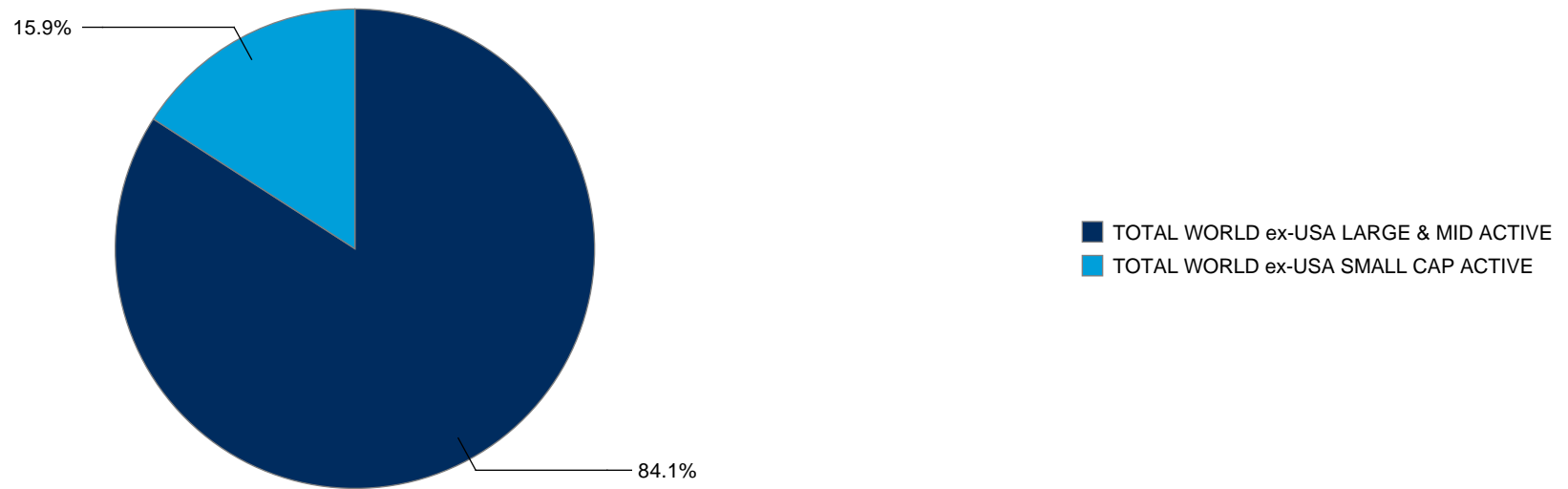
	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL DOMESTIC EQUITY	\$2.3	28.7



	<u>Policy Weight</u>	<u>Actual Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL SMALL CAP ACTIVE	2.9	2.9	0.0	7.0	6.2	0.8
TOTAL MID CAP ACTIVE	10.0	9.4	(0.6)	9.9	9.2	0.7
TOTAL SMALL CAP PASSIVE	2.9	2.8	(0.1)	8.3	6.2	2.0
TOTAL RUSSELL 1000 PASSIVE	55.0	58.8	3.8	7.1	7.2	(0.1)
TOTAL RUSSELL TOP 200 PASSIVE	28.7	25.5	(3.2)	6.6	6.6	(0.0)
TOTAL EMERGING MANAGERS	0.5	0.7	0.2	5.8	6.2	(0.4)

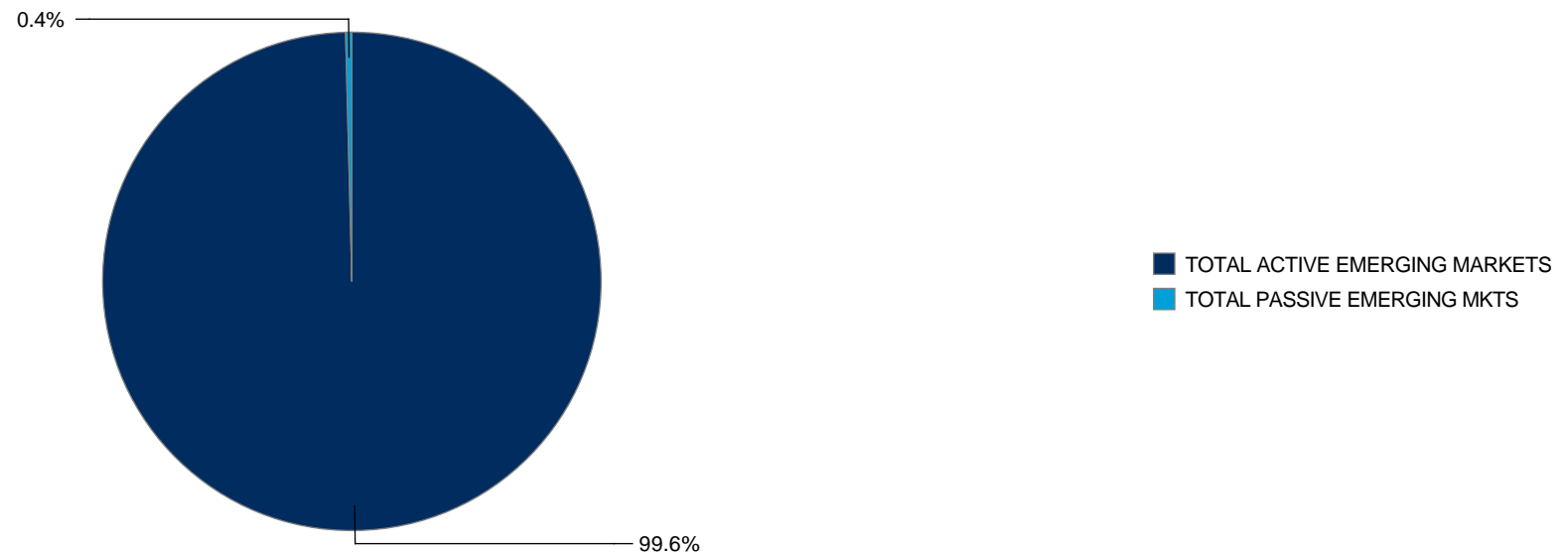


	<u>Market Value (Millions)</u>	<u>% of Plan</u>
TOTAL WORLD ex-USA	\$670.8	8.5



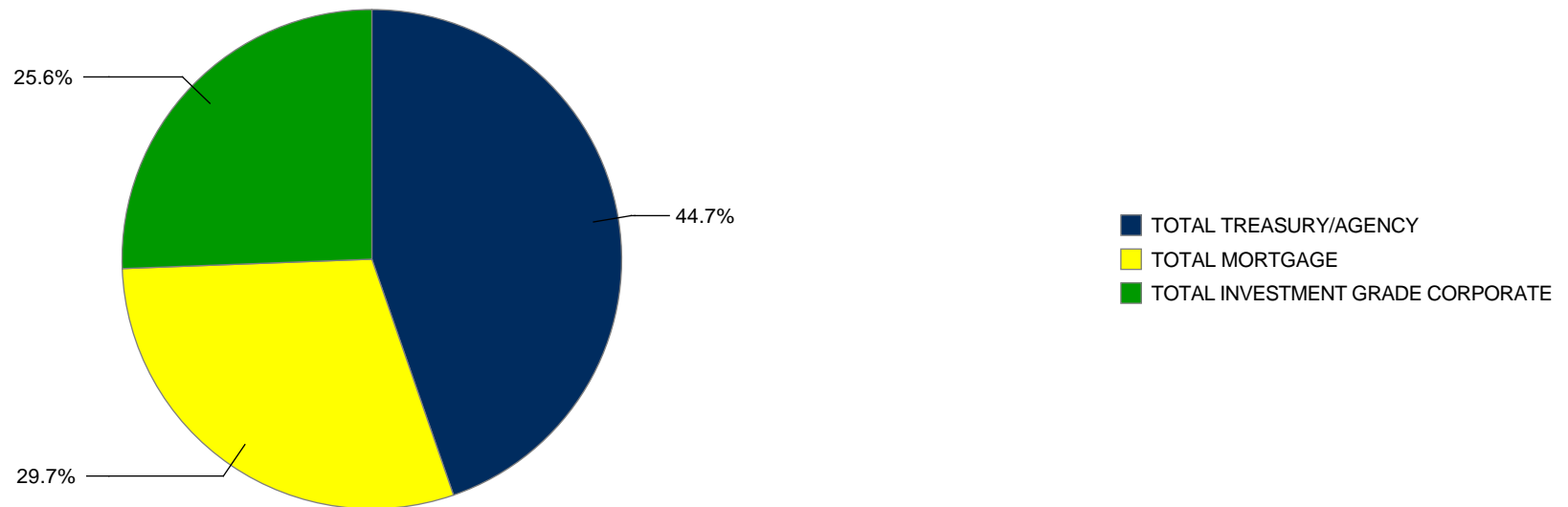
	<u>Asset Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL WORLD ex-USA LARGE & MID ACTIVE	84.11	13.96	16.18	(2.22)
TOTAL WORLD ex-USA SMALL CAP ACTIVE	15.89	16.86	17.12	(0.26)
TOTAL WORLD ex-USA	100.00	14.44	16.04	(1.60)

	<u>Market Value (Millions)</u>	<u>% of Plan</u>
TOTAL EMERGING MARKETS	\$399.4	5.0



	<u>Asset Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL ACTIVE EMERGING MARKETS	99.62	11.83	9.70	2.13
TOTAL PASSIVE EMERGING MARKETS	0.38	10.22	9.70	0.52
TOTAL EMERGING MARKETS	100.00	11.82	9.70	2.12

	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL STRUCTURED + ETI	\$1.0	12.7



	<u>Policy Weight</u>	<u>Asset Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL TREASURY/AGENCY	40.81	44.73	3.92	0.23	0.44	(0.21)
TOTAL MORTGAGE	29.94	29.67	(0.27)	1.49	2.14	(0.65)
TOTAL INVESTMENT GRADE CORPORATE	29.25	25.61	(3.64)	3.15	3.63	(0.48)



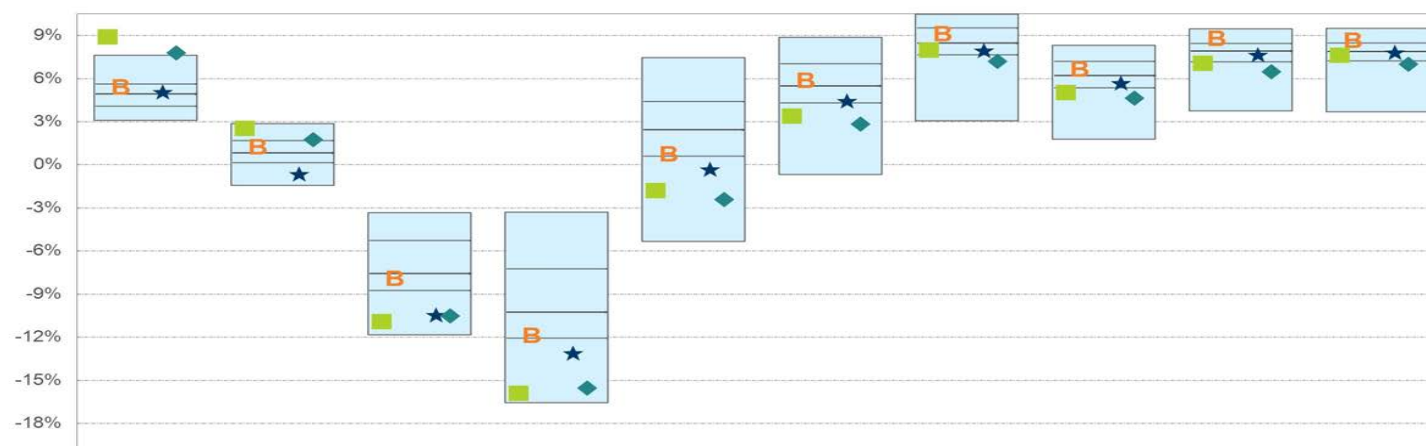
Through December 31, 2022



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$1 Billion

Cumulative Periods Ending : December 31, 2022



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	7.61	2.86	-3.34	-3.31	7.45	8.86	10.48	8.32	9.47	9.51
25th	5.63	1.70	-5.27	-7.25	4.40	7.04	9.53	7.20	8.45	8.49
50th	4.93	0.85	-7.57	-10.24	2.45	5.48	8.48	6.23	7.93	7.90
75th	4.08	0.15	-8.76	-12.05	0.60	4.30	7.65	5.37	7.18	7.22
95th	3.10	-1.43	-11.83	-16.57	-5.35	-0.69	3.05	1.79	3.77	3.69
No. Of Obs	80	79	78	78	77	77	68	68	68	68
B Total System - BOE	5.24 (35)	1.06 (47)	-8.10 (57)	-12.05 (76)	0.57 (76)	5.68 (47)	8.94 (44)	6.49 (42)	8.62 (19)	8.47 (26)
★ Board of Ed Policy Ben	4.86 (51)	-0.85 (88)	-10.66 (90)	-13.31 (83)	-0.51 (83)	4.25 (75)	7.77 (73)	5.49 (70)	7.46 (64)	7.64 (61)
■ Public Mkt Equiv 25	8.71 (1)	2.33 (12)	-11.12 (92)	-16.08 (91)	-2.00 (87)	3.21 (87)	7.80 (73)	4.84 (88)	6.88 (85)	7.43 (66)
◆ Public Mkt Equiv 35	7.58 (5)	1.57 (28)	-10.72 (90)	-15.72 (91)	-2.61 (89)	2.65 (88)	6.99 (88)	4.45 (90)	6.29 (90)	6.79 (87)

Wilshire Trust Universe Comparison Service® (TUCS®)



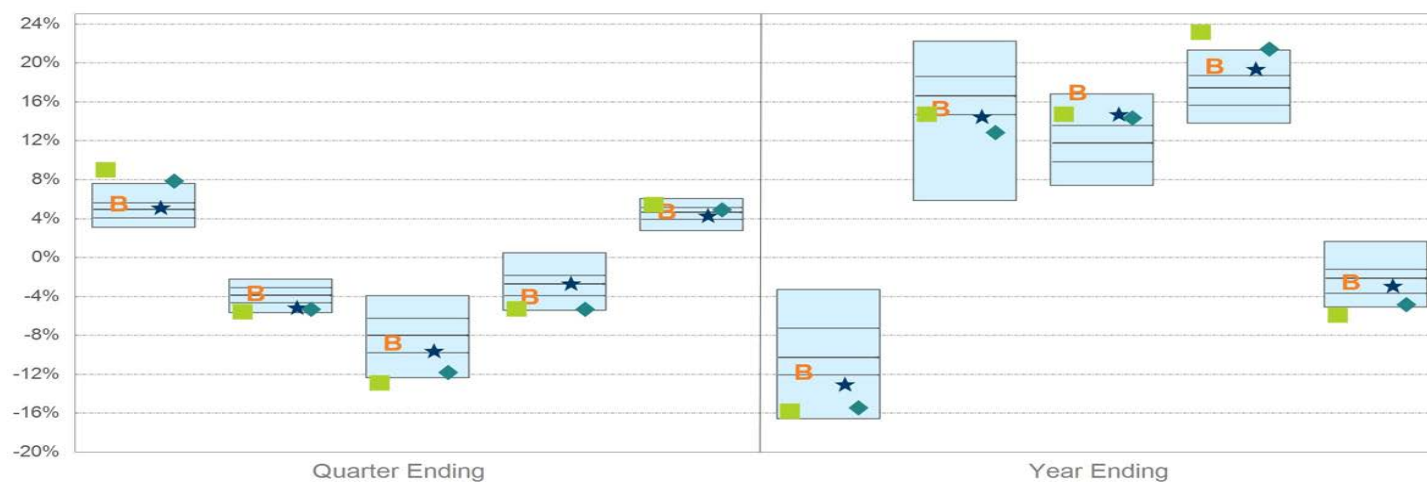
Through December 31, 2022



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$1 Billion

Consecutive Time Periods: December 31, 2022



Percentile Rankings	Dec 22	Sep 22	Jun 22	Mar 22	Dec 21	Dec 22	Dec 21	Dec 20	Dec 19	Dec 18
5th	7.61	-2.22	-3.92	0.50	6.07	-3.31	22.23	16.81	21.30	1.66
25th	5.63	-3.11	-6.24	-1.85	5.14	-7.25	18.62	13.58	18.69	-1.19
50th	4.93	-3.85	-7.99	-2.73	4.66	-10.24	16.61	11.80	17.45	-2.15
75th	4.08	-4.66	-9.77	-3.92	3.94	-12.05	14.69	9.86	15.65	-3.67
95th	3.10	-5.65	-12.35	-5.40	2.79	-16.57	5.89	7.42	13.79	-5.06
No. Of Obs	80	80	79	80	80	78	79	80	69	71
B Total System - BOE	5.24 (35)	-3.97 (53)	-9.06 (68)	-4.30 (78)	4.45 (58)	-12.05 (76)	15.00 (73)	16.68 (6)	19.37 (16)	-2.80 (63)
★ Board of Ed Policy Ben	4.86 (51)	-5.44 (91)	-9.90 (76)	-2.96 (53)	4.04 (72)	-13.31 (83)	14.19 (77)	14.46 (18)	19.07 (19)	-3.19 (69)
■ Public Mkt Equiv 25	8.71 (1)	-5.87 (95)	-13.15 (96)	-5.58 (96)	5.12 (26)	-16.08 (91)	14.46 (76)	14.45 (18)	22.85 (1)	-6.20 (99)
◆ Public Mkt Equiv 35	7.58 (5)	-5.59 (93)	-12.10 (92)	-5.60 (96)	4.59 (51)	-15.72 (91)	12.54 (88)	14.03 (21)	21.14 (5)	-5.12 (95)

Wilshire Trust Universe Comparison Service® (TUCS®)



Through December 31, 2022

**BOARD OF EDUCATION RETIREMENT SYSTEM
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2022**

INVESTMENT STYLE (EQUITIES)	Avg. Net Asset Value FY 2022 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS
Total US Equities	2,743.87	2,384.57	-	8.69	1,232.10	4.49	3,616.67	13.18
Small Cap Active:								
Small Cap Growth	91.29	1,450.87	-	158.94	1,219.47	133.59	2,670.34	292.53
Small Cap Value	91.29	1,450.87	-	158.94	1,219.47	133.59	2,670.34	292.53
Small Cap Core	-	-	-	-	-	-	-	-
Small Cap Fundamental Index	-	-	-	-	-	-	-	-
Mid Cap Active:								
Mid Cap Growth	252.20	764.29	-	30.31	-	-	764.29	30.31
Mid Cap Value	-	-	-	-	-	-	-	-
Mid Cap Core	252.20	764.29	-	30.31	-	-	764.29	30.31
Other Active:								
Russell 1000 Fundamental	17.06	97.07	-	56.91	12.63	7.40	109.70	64.31
Legato (Emerging Manager- Equity)	17.06	97.07	-	56.91	12.63	7.40	109.70	64.31
U.S. Environmental Managers	-	-	-	-	-	-	-	-
Total US Active Equities	360.54	2,312.23	-	64.13	1,232.10	34.17	3,544.33	98.31
Small Cap Passive:								
Small Cap Passive	82.54	2.93	-	0.35	-	-	2.93	0.35
Mid Cap Passive:								
Mid Cap Passive	-	-	-	-	-	-	-	-
Russell / S&P Passive:								
Russell 1000 Growth Passive	2,300.79	69.41	-	0.30	-	-	69.41	0.30
Russell 1000 Value Passive	-	-	-	-	-	-	-	-
Russell 1000 Core Passive	1,605.14	32.16	-	0.20	-	-	32.16	0.20
Passive Russell 3000	-	-	-	-	-	-	-	-
Passive S&P 500	-	-	-	-	-	-	-	-
Passive Russell Top 200	695.65	37.24	-	0.54	-	-	37.24	0.54
Total US Passive Equities	2,383.33	72.33	-	0.30	-	-	72.33	0.30
Total International Equities	1,331.37	4,267.11	-	32.05	-	-	4,267.11	32.05
Active Total Global Equities								
Global Equity	165.92	885.13	-	53.35	-	-	885.13	53.35
Active Total World Ex USA:								
World Ex-USA Large & Mid Developed Growth Active	788.71	1,955.42	-	24.79	-	-	1,955.42	24.79
World Ex-USA Large & Mid Developed Value Active	304.04	772.77	-	25.42	-	-	772.77	25.42
World Ex-USA Developed Small Cap Active	345.41	724.59	-	20.98	-	-	724.59	20.98
Total World Ex USA	139.27	458.06	-	32.89	-	-	458.06	32.89
NON-U.S. Activist	0.00	-	-	-	-	-	-	-
NON-U.S. Environmental Managers	-	-	-	-	-	-	-	-
Active Emerging Markets	462.25	2,051.15	-	44.37	-	-	2,051.15	44.37
International Fund of Funds	78.57	260.03	-	33.09	-	-	260.03	33.09
Total Active International Equities	1,329.54	4,266.60	-	32.09	-	-	4,266.60	32.09
Int'l Passive Equities:								
World Ex-USA Small Cap Passive	1.84	0.51	-	2.77	-	-	0.51	2.77
World Ex-USA Large & Mid Cap Passive	-	-	-	-	-	-	-	-
Passive Global	-	-	-	-	-	-	-	-
Passive Emerging Markets	1.84	0.51	-	2.77	-	-	0.51	2.77
Total Int'l Passive Equities	1.84	0.51	-	2.77	-	-	0.51	2.77
Real Estate Equity Securities	-	-	-	-	-	-	-	-
Total Public Equities	4,241.16	7,536.81	-	17.77	1,232.10	2.91	8,768.91	20.68

Actual Fees Incurred

Through December 31, 2022

BOARD OF EDUCATION RETIREMENT SYSTEM								
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2022								
INVESTMENT STYLE (FIXED INCOME)	Avg. Net Asset Value FY 2022 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS
Total Fixed Income	2,731.87	3,242.62	-	11.87	-	-	3,242.62	11.87
Structured Program:	1,363.50	668.88	-	4.91	-	-	668.88	4.91
Government Treas/Agency Sector	520.21	100.31	-	1.93	-	-	100.31	1.93
Long Duration Treasury	62.46	6.42	-	1.03	-	-	6.42	1.03
Mortgage Sector	361.62	156.18	-	4.32	-	-	156.18	4.32
Investment Grade Credit Sector	419.21	405.96	-	9.68	-	-	405.96	9.68
Developing Managers	124.26	250.09	-	20.13	-	-	250.09	20.13
Emerging Managers	-	-	-	-	-	-	-	-
TIPS:	309.15	15.45	-	0.50	-	-	15.45	0.50
Active TIPS Managers	-	-	-	-	-	-	-	-
Passive TIPS Managers	309.15	15.45	-	0.50	-	-	15.45	0.50
High Yield	766.05	2,231.92	-	29.14	-	-	2,231.92	29.14
Bank Loans	0.42	1.30	-	30.64	-	-	1.30	30.64
Convertible Bonds	-	-	-	-	-	-	-	-
ETI - Access - RBC	10.47	18.56	-	17.73	-	-	18.56	17.73
ETI - AFL-CIO HIT	17.75	56.42	-	31.79	-	-	56.42	31.79
Other ETI Programs (Internally Managed)	15.07	-	-	-	-	-	-	-
Short Term (Internally Managed & Other)	125.21	-	-	-	-	-	-	-
Total Public Markets	6,973.03	10,779.43	-	15.46	1,232.10	1.77	12,011.53	17.23
INVESTMENT STYLE (PRIVATE MARKETS)								
Hedge Funds	-	-	-	-	-	-	-	-
Private Equity	830.71	10,568.48	2,658.80	159.23	11,010.25	132.54	24,237.53	291.77
Private Real Estate	569.50	5,680.98	1,781.60	131.04	6,278.74	110.25	13,741.33	241.29
Infrastructure	197.00	4,273.43	1,085.59	272.04	(683.97)	(34.72)	4,675.05	237.32
Opportunistic Fixed Income	135.55	1,128.53	472.06	118.08	471.98	34.82	2,072.56	152.90
Total Private Markets	1,732.75	21,651.42	5,998.05	159.57	17,077.00	98.55	44,726.47	258.12
Total Overall	8,705.78	32,430.85	5,998.05	44.14	18,309.11	21.03	56,738.00	65.17

The overall carried interest and performance incentive fees paid by BERS for the Fiscal Year: 21.03 BPS

General Footnotes:

Through December 31, 2022

NYC BOARD OF EDUCATION RETIREMENT SYSTEM
SECURITIES LENDING INCOME
December 31, 2022

	U. S. FIXED INCOME	U. S. EQUITY	INTERNATIONAL EQUITY	TOTAL
1989	70,000	-	-	70,000
1990	79,000	-	-	79,000
1991	111,000	-	-	111,000
1992	122,000	11,000	-	133,000
1993	79,000	32,000	15,000	126,000
1994	93,000	77,000	20,000	190,000
1995	112,000	93,000	12,000	217,000
1996	99,000	76,000	27,000	202,000
1997	101,000	126,000	40,000	267,000
1998	111,000	170,000	60,000	341,000
1999	159,000	263,000	100,000	522,000
2000	193,000	310,000	97,000	600,000
2001	295,000	208,000	159,000	662,000
2002	209,000	143,000	152,000	504,000
2003	153,000	158,000	195,000	506,000
2004	226,000	255,000	174,000	655,000
2005	384,000	479,000	217,000	1,080,000
2006	303,000	734,000	246,000	1,283,000
2007	593,000	1,208,000	272,000	2,073,000
2008	2,514,000	2,266,000	451,000	5,231,000
2009	698,000	1,416,000	367,000	2,481,000
2010	246,000	729,000	326,000	1,301,000
2011	340,000	943,000	599,000	1,882,000
2012	516,000	1,144,000	495,000	2,155,000
2013	349,000	1,325,000	446,000	2,120,000
2014	287,000	512,000	1,387,000	2,186,000
2015	338,000	429,000	1,985,000	2,752,000
2016	418,000	1,585,000	1,685,000	3,688,000
2017	686,000	1,015,000	1,215,000	2,916,000
2018	582,738	682,039	954,109	2,218,886
2019	319,440	712,602	788,647	1,820,689
2020	360,464	392,674	356,478	1,109,617
2021	672,093	566,378	92,881	1,331,351
2022	979,471	770,306	77,445	1,827,222
Since Inception	12,798,206	18,830,999	13,011,559	44,640,765

**New York City
Board of Education Retirement System**

Appendix A

Consolidated Performance Report

Consolidated Performance Report

Through December 31, 2022

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2021	CYE 2020	CYE 2019	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
SYSTEM RETURN SUMMARY															
5 BERS-TOTAL PORTFOLIO - GROSS	7,935	100.00	5.24	1.06	(12.05)	(8.49)	15.00	16.68	19.37	(12.05)	5.68	6.49	8.47	8.62	07/01/1987
BERS - ESTIMATED INVESTMENT FEES			(0.19)	(0.36)	(0.53)	(0.52)	(0.59)	(0.29)	(0.31)	(0.53)	(0.48)	(0.38)			
EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUAL)			(0.03)	(0.05)	(0.12)	(0.13)	(0.13)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)			
EST MANAGEMENT FEES - ALTERNATIVE MARKETS (CASH)			(0.16)	(0.31)	(0.41)	(0.39)	(0.46)	(0.17)	(0.19)	(0.41)	(0.36)	(0.26)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
BERS-TOTAL PORTFOLIO - NET MGR			5.05	0.70	(12.57)	(9.01)	14.41	16.39	19.06	(12.57)	5.20	6.10			
BOARD OF EDUCATION POLICY BENCHMARK			4.86	(0.84)	(13.31)	(8.31)	14.19	14.46	19.07	(13.31)	4.25	5.48	7.64		
EXCESS RETURN			0.19	1.55	0.74	(0.70)	0.22	1.93	(0.01)	0.74	0.95	0.62	0.83		
EQUITY RETURN DETAIL															
18 BERS-TOTAL EQUITY (INCLUDES ALTERNATIVES) - GROSS	5,490	69.19	6.47	1.77	(12.90)	(8.36)	21.72	20.57	24.41	(12.90)	8.53	8.74	11.20	9.37	08/01/1993
ESTIMATED INVESTMENT FEES			(0.26)	(0.47)	(0.70)	(0.71)	(0.85)	(0.39)	(0.42)	(0.70)	(0.66)	(0.52)			
EST MANAGEMENT FEES			(0.26)	(0.47)	(0.70)	(0.71)	(0.85)	(0.39)	(0.42)	(0.70)	(0.66)	(0.52)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
BERS-TOTAL EQUITY (INCLUDES ALTERNATIVES) - NET MGR			6.21	1.30	(13.60)	(9.08)	20.88	20.18	23.99	(13.60)	7.87	8.22			
26 BERS-TOTAL EQUITY - GROSS	3,551	44.75	9.30	2.26	(21.59)	(20.26)	17.30	23.57	28.11	(21.59)	4.36	5.73	9.61	8.00	04/01/2004
ESTIMATED INVESTMENT FEES			(0.04)	(0.07)	(0.14)	(0.15)	(0.22)	(0.20)	(0.20)	(0.14)	(0.18)	(0.17)			
EST MANAGEMENT FEES			(0.04)	(0.07)	(0.14)	(0.15)	(0.22)	(0.20)	(0.20)	(0.14)	(0.18)	(0.17)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
BERS-TOTAL EQUITY - NET MGR			9.26	2.19	(21.72)	(20.41)	17.08	23.38	27.91	(21.72)	4.18	5.55			
34 BERS-TOTAL DOMESTIC EQUITY - GROSS	2,281	28.74	7.28	2.19	(20.37)	(14.96)	25.13	21.91	31.14	(20.37)	6.70	8.74	12.21	9.81	09/01/1991
ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.07)	(0.08)	(0.13)	(0.11)	(0.10)	(0.07)	(0.10)	(0.09)			
BERS-TOTAL DOMESTIC EQUITY - NET MGR			7.27	2.17	(20.44)	(15.05)	25.00	21.80	31.04	(20.44)	6.60	8.64			
RUSSELL 3000 (DAILY)			7.18	2.40	(19.21)	(13.87)	25.66	20.89	31.02	(19.21)	7.07	8.79	12.13	9.72	
EXCESS RETURN			0.08	(0.23)	(1.23)	(1.18)	(0.66)	0.91	0.02	(1.23)	(0.47)	(0.14)	0.07	0.10	
44 BERS-TOTAL SMALL CAP - GROSS	130	1.64	7.64	2.32	(22.70)	(21.59)	23.03	24.30	25.20	(22.70)	5.74	5.69	9.85	6.91	04/01/2004
ESTIMATED INVESTMENT FEES			(0.03)	(0.07)	(0.71)	(0.73)	(0.68)	(0.21)	(0.00)	(0.71)	(0.58)	(0.35)			
BERS-TOTAL SMALL CAP - NET MGR			7.60	2.25	(23.41)	(22.32)	22.35	24.10	25.20	(23.41)	5.16	5.34			
RUSSELL 2000 (DAILY)			6.23	3.91	(20.44)	(25.20)	14.82	19.96	25.52	(20.44)	3.10	4.13	9.01	7.42	
EXCESS RETURN			1.37	(1.66)	(2.98)	2.88	7.53	4.13	(0.33)	(2.98)	2.06	1.22	0.84	(0.51)	
54 BERS-TOTAL MID CAP - GROSS	214	2.70	9.98	5.25	(22.30)	(24.85)	10.77	26.31	33.87	(22.30)	2.83	6.30	11.62	11.55	10/01/2010
ESTIMATED INVESTMENT FEES			(0.08)	(0.16)	(0.23)	(0.28)	(0.70)	(1.19)	(1.19)	(0.23)	(0.64)	(0.73)			
BERS-TOTAL MID CAP - NET MGR			9.90	5.09	(22.53)	(25.13)	10.07	25.12	32.68	(22.53)	2.18	5.57			
RUSSELL MIDCAP (DAILY)			9.18	5.43	(17.32)	(17.30)	22.58	17.10	30.54	(17.32)	5.88	7.10	10.96	11.25	
EXCESS RETURN			0.72	(0.33)	(5.22)	(7.83)	(12.52)	8.02	2.14	(5.22)	(3.70)	(1.53)	0.66	0.29	
64 BERS-TOTAL RUSSELL 1000 - GROSS	1,340	16.89	7.14	2.04	(19.95)	(13.66)	26.64	20.97	31.35	(19.95)	7.04			9.67	04/01/2018
ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)			(0.00)	
BERS-TOTAL RUSSELL 1000 - NET MGR			7.14	2.04	(19.95)	(13.66)	26.64	20.97	31.35	(19.95)	7.04			9.67	
RUSSELL 1000 (DAILY)			7.24	2.30	(19.13)	(13.04)	26.45	20.96	31.43	(19.13)	7.35			9.79	
EXCESS RETURN			(0.10)	(0.26)	(0.82)	(0.63)	0.18	0.00	(0.07)	(0.82)	(0.31)			(0.12)	
74 BERS-TOTAL RUSSELL TOP 200 PASSIVE - GROSS	580	7.31	6.56	1.32	(20.15)	(12.23)	27.51	22.41	31.67	(20.15)	7.62			10.51	05/01/2018
ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)			(0.01)	
BERS-TOTAL RUSSELL TOP 200 PASSIVE - NET MGR			6.56	1.32	(20.15)	(12.24)	27.50	22.40	31.66	(20.15)	7.61			10.51	
RUSSELL TOP 200 INDEX (DAILY)			6.56	1.22	(19.77)	(11.46)	27.90	22.37	31.75	(19.77)	7.89			10.70	
EXCESS RETURN			(0.00)	0.10	(0.39)	(0.78)	(0.40)	0.03	(0.09)	(0.39)	(0.28)			(0.19)	

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		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2021	CYE 2020	CYE 2019	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN DETAIL																
86	BERS-TOTAL EMERGING MANAGER - GROSS	16	0.20	5.93	4.96	(15.72)	(17.02)	25.72	19.98	23.94	(15.72)	8.33	7.75		8.26	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.13)	(0.26)	(0.48)	(0.48)	(0.70)	(0.60)	(0.62)	(0.48)	(0.59)	(0.57)		(0.53)	
	BERS-TOTAL EMERGING MANAGER - NET MGR			5.80	4.70	(16.20)	(17.50)	25.02	19.38	23.33	(16.20)	7.74	7.19		7.72	
	RUSSELL 2000 (DAILY)			6.23	3.91	(20.44)	(25.20)	14.82	19.96	25.52	(20.44)	3.10	4.13		5.50	
	EXCESS RETURN			(0.43)	0.80	4.23	7.70	10.20	(0.58)	(2.20)	4.23	4.64	3.63		2.22	
96	BERS-TOTAL WORLD ex-USA EQUITY - GROSS	671	8.45	14.51	4.25	(24.63)	(31.35)	3.28	34.62	26.47	(24.63)	1.57	2.49	6.25	7.23	11/01/1992
	ESTIMATED INVESTMENT FEES			(0.07)	(0.13)	(0.18)	(0.17)	(0.25)	(0.33)	(0.31)	(0.18)	(0.25)	(0.25)			
	BERS-TOTAL WORLD ex-USA EQUITY - NET MGR			14.44	4.12	(24.81)	(31.51)	3.02	34.29	26.16	(24.81)	1.32	2.24			
	NYC DEVELOPED EQUITY BENCHMARK			16.04	5.33	(15.26)	(17.73)	12.39	8.32	22.91	(15.26)	1.05	1.59	4.75	5.66	
	EXCESS RETURN			(1.60)	(1.21)	(9.55)	(13.78)	(9.37)	25.97	3.26	(9.55)	0.28	0.65	1.50	1.58	
106	BERS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - GROSS	564	7.11	14.03	3.97	(25.88)	(33.39)	0.34	37.50	27.08	(25.88)	0.75	2.27		4.38	11/01/2013
	ESTIMATED INVESTMENT FEES			(0.07)	(0.12)	(0.17)	(0.15)	(0.23)	(0.32)	(0.29)	(0.17)	(0.23)	(0.24)		(0.24)	
	BERS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - NET MGR			13.96	3.85	(26.05)	(33.54)	0.11	37.17	26.79	(26.05)	0.51	2.04		4.13	
	NYC CUSTOM WORLD EX-USA LG & MID ACT INDEX			16.18	5.50	(14.29)	(16.76)	12.62	7.59	22.49	(14.29)	1.27	1.79		3.18	
	EXCESS RETURN			(2.22)	(1.65)	(11.76)	(16.79)	(12.51)	29.59	4.30	(11.76)	(0.75)	0.25		0.95	
126	BERS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - GROSS	107	1.34	16.96	5.92	(18.57)	(21.06)	19.51	17.27	22.61	(18.57)	4.50	2.55		7.59	05/01/2013
	ESTIMATED INVESTMENT FEES			(0.10)	(0.18)	(0.27)	(0.26)	(0.39)	(0.39)	(0.41)	(0.27)	(0.34)	(0.34)			
	BERS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - NET MGR			16.86	5.75	(18.83)	(21.32)	19.12	16.88	22.21	(18.83)	4.16	2.21			
	S&P EPAC SMALL CAP USD NET			17.12	3.80	(22.69)	(26.27)	8.06	13.78	23.71	(22.69)	1.68	(0.87)		4.70	
	EXCESS RETURN			(0.26)	1.95	3.86	4.96	11.06	3.10	(1.50)	3.86	5.84	3.08		2.89	
136	BERS-TOTAL EMERGING MARKETS - GROSS	399	5.03	11.95	(2.22)	(22.41)	(26.28)	1.55	13.05	16.90	(22.41)	(3.78)	(2.68)	1.60	6.31	11/01/1997
	ESTIMATED INVESTMENT FEES			(0.13)	(0.22)	(0.34)	(0.32)	(0.41)	(0.26)	(0.27)	(0.34)	(0.34)	(0.30)			
	BERS-TOTAL EMERGING MARKETS - NET MGR			11.82	(2.44)	(22.75)	(26.60)	1.13	12.79	16.63	(22.75)	(4.13)	(2.98)			
	MSCI EMERGING MARKETS			9.70	(2.99)	(20.09)	(25.28)	(2.54)	18.31	18.42	(20.09)	(2.69)	(1.40)	1.44		
	EXCESS RETURN			2.12	0.55	(2.66)	(1.32)	3.68	(5.52)	(1.79)	(2.66)	(1.43)	(1.58)	0.16		
146	BERS-TOTAL ACTIVE EMERGING MARKETS - GROSS	398	5.01	11.96	(2.22)	(22.42)	(26.29)	1.69	11.09	16.09	(22.42)	(4.30)	(3.32)	1.30	6.21	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.13)	(0.22)	(0.34)	(0.32)	(0.43)	(0.37)	(0.38)	(0.34)	(0.38)	(0.36)			
	BERS-TOTAL ACTIVE EMERGING MARKETS - NET MGR			11.83	(2.44)	(22.76)	(26.61)	1.26	10.72	15.71	(22.76)	(4.68)	(3.68)			
	MSCI EMERGING MARKETS			9.70	(2.99)	(20.09)	(25.28)	(2.54)	18.31	18.42	(20.09)	(2.69)	(1.40)	1.44	6.25	
	EXCESS RETURN			2.13	0.55	(2.67)	(1.32)	3.80	(7.59)	(2.71)	(2.67)	(1.99)	(2.29)	(0.13)	(0.04)	
156	BERS-TOTAL PASSIVE EMERGING MARKETS - GROSS	2	0.02	10.22	(2.84)	(19.57)	(24.78)	(2.08)	17.29	18.79	(19.57)	(2.61)	(1.26)		4.27	12/01/2016
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)	(0.01)		(0.03)	
	BERS-TOTAL PASSIVE EMERGING MARKETS - NET MGR			10.22	(2.85)	(19.57)	(24.79)	(2.10)	17.27	18.76	(19.57)	(2.62)	(1.27)		4.24	
	MSCI EMERGING MARKETS			9.70	(2.99)	(20.09)	(25.28)	(2.54)	18.31	18.42	(20.09)	(2.69)	(1.40)		4.17	
	EXCESS RETURN			0.52	0.15	0.52	0.49	0.44	(1.04)	0.34	0.52	0.07	0.13		0.07	
166	BERS-TOTAL INTERNATIONAL FUND OF FUNDS - GROSS	69	0.87	13.61	3.70	(17.16)	(20.64)	9.43	17.00	22.67	(17.16)	1.98	2.22		4.54	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.10)	(0.18)	(0.27)	(0.26)	(0.53)	(0.41)	(0.42)	(0.27)	(0.39)	(0.38)		(0.38)	
	BERS-TOTAL INTERNATIONAL FUND OF FUNDS - NET MGR			13.52	3.53	(17.43)	(20.90)	8.90	16.60	22.25	(17.43)	1.59	1.84		4.15	
	MSCI ACWI EX USA IMI NET			14.15	3.09	(16.58)	(19.86)	8.53	11.12	21.63	(16.58)	0.20	0.85		3.38	
	EXCESS RETURN			(0.63)	0.44	(0.85)	(1.04)	0.37	5.48	0.62	(0.85)	1.39	1.37		0.78	
176	BERS-TOTAL GLOBAL EQUITY - GROSS	131	1.66	9.41	4.06	(28.80)	(29.54)	12.70	39.74	36.70	(28.80)	3.89			6.45	06/01/2018
	ESTIMATED INVESTMENT FEES			(0.15)	(0.28)	(0.37)	(0.37)	(0.60)	(0.77)	(0.79)	(0.37)	(0.56)			(0.58)	
	BERS-TOTAL GLOBAL EQUITY - NET MGR			9.26	3.78	(29.17)	(29.91)	12.10	38.98	35.91	(29.17)	3.33			5.87	
	MSCI AC WORLD (DAILY CONST)			9.76	2.28	(18.36)	(15.75)	18.54	16.25	26.60	(18.36)	4.00			5.69	
	EXCESS RETURN			(0.50)	1.50	(10.81)	(14.16)	(6.44)	22.72	9.31	(10.81)	(0.67)			0.19	

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ALTERNATIVE EQUITY RETURN DETAIL															
188	BERS-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - GROSS	936	11.79	0.72	(2.35)	5.77	31.85	52.85	18.72	14.11	5.77	24.27	21.41	18.78	07/01/2006
	ESTIMATED INVESTMENT FEES			(0.52)	(1.19)	(2.25)	(3.55)	(4.14)	(1.24)	(1.45)	(2.25)	(2.43)	(1.89)		
	BERS-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - NET MGR			0.20	(3.54)	3.52	28.30	48.72	17.48	12.66	3.52	21.84	19.52		
	NYC R3000 +3% LAGGED			(3.74)	(19.19)	(15.11)	15.25	35.74	18.42	6.00	(15.11)	10.92	11.86	14.64	12.32
	EXCESS RETURN			3.95	15.65	18.63	13.04	12.97	(0.94)	6.66	18.63	10.92	7.66	4.14	(1.43)
198	BERS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - GROSS	752	9.48	1.66	3.84	19.46	32.25	24.29	0.82	7.61	19.46	14.39	12.52	12.51	12/01/2010
	ESTIMATED INVESTMENT FEES			(0.60)	(0.98)	(2.06)	(2.37)	(1.90)	(0.63)	(0.71)	(2.06)	(1.48)	(1.13)		
	BERS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - NET MGR			1.06	2.87	17.40	29.88	22.39	0.18	6.90	17.40	12.91	11.38		
	NCREIF NFI-ODCE NET + 100 BP			(4.93)	(4.39)	7.61	29.57	22.21	1.35	5.43	7.61	10.05	8.79	10.19	11.08
	EXCESS RETURN			5.99	7.26	9.79	0.32	0.18	(1.16)	1.47	9.79	2.86	2.60	2.32	1.23
208	BERS-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - GROSS	252	3.17	3.31	3.93	13.73	16.96	17.75	10.82	13.63	13.73	14.06	14.12	14.79	12/01/2013
	ESTIMATED INVESTMENT FEES			(1.23)	(1.96)	(3.44)	(3.37)	(3.31)	(1.40)	(1.45)	(3.44)	(2.70)	(2.13)	(2.91)	
	BERS-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - NET MGR			2.08	1.97	10.30	13.59	14.44	9.42	12.17	10.30	11.37	11.99	11.88	
	CPI + 4%			1.82	3.46	10.70	13.29	11.48	5.37	6.41	10.70	9.15	7.98	6.84	
	EXCESS RETURN			0.26	(1.48)	(0.41)	0.30	2.96	4.05	5.77	(0.41)	2.21	4.01	5.04	

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FIXED INCOME RETURN DETAIL															
220 BERS-TOTAL FIXED INCOME - GROSS	2,444	30.81	2.43	(0.63)	(10.53)	(8.85)	2.00	9.20	9.46	(10.53)	(0.12)	1.69	2.31	7.11	02/01/1980
ESTIMATED INVESTMENT FEES			(0.04)	(0.10)	(0.15)	(0.12)	(0.13)	(0.10)	(0.10)	(0.15)	(0.13)	(0.12)			
EST MANAGEMENT FEES			(0.04)	(0.10)	(0.15)	(0.12)	(0.13)	(0.10)	(0.10)	(0.15)	(0.13)	(0.12)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
BERS-TOTAL FIXED INCOME - NET MGR			2.39	(0.73)	(10.67)	(8.97)	1.87	9.09	9.36	(10.67)	(0.24)	1.57			
228 BERS-FIXED INCOME (ex OFI & CASH) - GROSS	2,120	26.72	2.59	(0.77)	(11.64)	(9.99)	1.32			(11.64)				(3.92)	09/01/2020
ESTIMATED INVESTMENT FEES			(0.04)	(0.07)	(0.12)	(0.11)	(0.12)			(0.12)				(0.12)	
EST MANAGEMENT FEES			(0.04)	(0.07)	(0.12)	(0.11)	(0.12)			(0.12)				(0.12)	
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
BERS-FIXED INCOME (ex OFI & CASH) - NET MGR			2.55	(0.84)	(11.75)	(10.10)	1.20			(11.75)				(4.04)	
236 BERS-TOTAL STRUCTURED FIXED INCOME - GROSS	972	12.25	1.56	(2.92)	(12.97)	(10.23)	(1.48)	10.05	9.16	(12.97)	(1.92)	0.52	1.59	6.67	01/01/1985
ESTIMATED INVESTMENT FEES			(0.02)	(0.03)	(0.05)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)			
BERS-TOTAL STRUCTURED FIXED INCOME - NET MGR			1.54	(2.95)	(13.01)	(10.28)	(1.53)	10.00	9.12	(13.01)	(1.96)	0.47			
NYC CUSTOM STRUCTURED INDEX-BERS			1.88	(3.09)	(13.15)	(10.27)	(1.43)	11.38	10.27	(13.15)	(1.57)	0.97	1.74		
EXCESS RETURN			(0.34)	0.14	0.14	(0.00)	(0.10)	(1.38)	(1.15)	0.14	(0.39)	(0.49)	(0.15)		
246 BERS-TOTAL GOVERNMENT - GROSS	452	5.70	0.23	(3.68)	(11.57)	(7.95)	(2.05)	10.87	8.16	(11.57)	(1.34)	0.72	1.21	6.30	05/01/1987
ESTIMATED INVESTMENT FEES			(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)			
BERS-TOTAL GOVERNMENT - NET MGR			0.23	(3.69)	(11.59)	(7.97)	(2.07)	10.84	8.13	(11.59)	(1.36)	0.69			
CUSTOM GOVERNMENT BENCHMARK - BOE			0.44	(4.00)	(12.29)	(8.33)	(2.09)	13.94	10.40	(12.29)	(0.72)	1.55	1.82		
EXCESS RETURN			(0.21)	0.31	0.70	0.36	0.02	(3.10)	(2.27)	0.70	(0.64)	(0.86)	(0.61)		
256 BERS-TOTAL MORTGAGE - GROSS	261	3.29	1.56	(3.48)	(11.77)	(8.71)	(0.74)	4.47	6.97	(11.77)	(2.92)	(0.22)	1.00	4.72	08/01/1993
ESTIMATED INVESTMENT FEES			(0.02)	(0.03)	(0.05)	(0.04)	(0.04)	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)			
BERS-TOTAL MORTGAGE - NET MGR			1.54	(3.51)	(11.82)	(8.75)	(0.79)	4.42	6.93	(11.82)	(2.97)	(0.27)			
NYC CUSTOM MORTGAGE BENCHMARK			2.14	(3.32)	(11.81)	(9.03)	(1.04)	3.91	6.68	(11.81)	(3.21)	(0.46)	0.77	4.27	
EXCESS RETURN			(0.60)	(0.19)	(0.01)	0.28	0.26	0.52	0.25	(0.01)	0.24	0.19	0.23	0.45	
266 BERS-TOTAL INVESTMENT GRADE CORPORATE - GROSS	259	3.26	3.18	(2.12)	(16.67)	(14.56)	(1.36)	10.51	14.68	(16.67)	(3.15)	0.30	2.00	6.34	04/01/1987
ESTIMATED INVESTMENT FEES			(0.03)	(0.05)	(0.08)	(0.08)	(0.10)	(0.09)	(0.10)	(0.08)	(0.09)	(0.09)			
BERS-TOTAL INVESTMENT GRADE CORPORATE - NET MGR			3.15	(2.18)	(16.75)	(14.64)	(1.45)	10.41	14.58	(16.75)	(3.24)	0.21			
NYC CUSTOM IGC BENCHMARK			3.63	(1.61)	(15.76)	(14.19)	(0.85)	9.70	13.40	(15.76)	(2.87)	0.38	1.76		
EXCESS RETURN			(0.48)	(0.57)	(0.99)	(0.45)	(0.61)	0.71	1.18	(0.99)	(0.37)	(0.17)	0.24		

Consolidated Performance Report

Through December 31, 2022

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2021	CYE 2020	CYE 2019	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
FIXED INCOME RETURN DETAIL															
278 BERS-TOTAL CORE FI- DEVELOPING MGRS - GROSS	111	1.40	1.92	(2.62)	(13.13)	(10.77)	(1.12)			(13.13)				(5.85)	09/01/2020
ESTIMATED INVESTMENT FEES			(0.05)	(0.10)	(0.18)	(0.18)	(0.20)			(0.18)				(0.19)	
BERS-TOTAL CORE FI- DEVELOPING MGRS - NET MGR			1.86	(2.72)	(13.31)	(10.95)	(1.32)			(13.31)				(6.04)	
BLOOMBERG U.S. AGGREGATE			1.87	(2.97)	(13.01)	(10.29)	(1.54)			(13.01)				(6.18)	
EXCESS RETURN			(0.01)	0.25	(0.30)	(0.66)	0.23			(0.30)				0.14	
288 BERS-TOTAL TIPS - GROSS	280	3.53	1.94	(3.34)	(11.91)	(5.11)	5.93	11.07	8.45	(11.91)	1.20	2.10	1.17	3.42	06/01/2005
ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)			
BERS-TOTAL TIPS - NET MGR			1.93	(3.35)	(11.92)	(5.11)	5.93	11.06	8.44	(11.92)	1.19	2.10			
BLOOMBERG GLOBAL INFL-LINKED: U.S. TIPS			2.04	(3.21)	(11.85)	(5.14)	5.96	10.99	8.43	(11.85)	1.21	2.11	1.12	3.30	
EXCESS RETURN			(0.11)	(0.14)	(0.07)	0.03	(0.03)	0.07	0.02	(0.07)	(0.01)	(0.01)	0.06	0.12	
298 BERS-TOTAL TARGETED INVESTMENTS (NO CASH) - GROSS	39	0.49	1.24	(2.37)	(10.99)	(8.66)	(0.72)	6.81	9.82	(10.99)	(1.91)	0.94	2.06	6.05	12/01/1984
ESTIMATED INVESTMENT FEES			(0.05)	(0.09)	(0.16)	(0.16)	(0.17)	(0.19)	(0.21)	(0.16)	(0.17)	(0.19)	(0.25)	(0.13)	
BERS-TOTAL TARGETED INVESTMENTS (NO CASH) - NET MGR			1.19	(2.46)	(11.15)	(8.81)	(0.89)	6.63	9.60	(11.15)	(2.08)	0.74	1.81	5.92	
BERS CUSTOM BENCHMARK (NO CASH)			1.94	(2.49)	(10.76)	(8.48)	(0.96)	5.84	7.67	(10.76)	(2.20)	0.31	1.22		
EXCESS RETURN			(0.75)	0.03	(0.39)	(0.33)	0.08	0.78	1.93	(0.39)	0.12	0.43	0.59		
308 BERS-TOTAL HIGH YIELD - GROSS	718	9.05	4.47	3.96	(9.33)	(11.16)	6.26	8.45	14.08	(9.33)	1.48	3.24	4.53	5.52	08/01/1997
ESTIMATED INVESTMENT FEES			(0.08)	(0.15)	(0.26)	(0.26)	(0.31)	(0.34)	(0.37)	(0.26)	(0.30)	(0.31)			
BERS-TOTAL HIGH YIELD - NET MGR			4.39	3.81	(9.59)	(11.42)	5.95	8.12	13.71	(9.59)	1.18	2.92			
HIGH YIELD CUSTOM BENCHMARK			4.17	3.50	(11.18)	(12.82)	5.26	7.05	14.32	(11.18)	0.03	2.24	3.74	5.34	
EXCESS RETURN			0.23	0.31	1.59	1.40	0.69	1.07	(0.61)	1.59	1.15	0.68	0.79	0.18	
318 BERS- TOTAL BANK LOANS - GROSS	-	-						1.43	8.17						12/01/2012
ESTIMATED INVESTMENT FEES								(0.31)	(0.36)						
BERS-TOTAL BANK LOANS - NET MGR								1.12	7.82						
CSFB LEVERAGED LOAN INDEX						(2.68)	5.40	2.78	8.17						
EXCESS RETURN								(1.66)	(0.36)						
328 BERS-TOTAL OPPORTUNISTIC FIXED INCOME - GROSS	234	2.95	1.21	0.76	2.58	8.67	18.81			2.58				11.19	08/01/2020
ESTIMATED INVESTMENT FEES			(0.10)	(0.54)	(0.60)	(0.49)	(0.47)			(0.60)				(0.45)	
BERS-TOTAL OPPORTUNISTIC FIXED INCOME - NET MGR			1.11	0.22	1.98	8.18	18.34			1.98				10.74	
OPPORTUNISTIC FIXED INCOME JPMGHY / CSFB 50/50 BLEND PLUS 300			4.10	5.22	(2.79)	(4.95)	8.29			(2.79)				5.43	
EXCESS RETURN			(2.99)	(5.00)	4.77	13.13	10.05			4.77				5.31	
CASH SUMMARY															
340 Short Term BERS - GROSS	90	1.13	0.89	1.40	1.41	0.01	0.07	0.44	2.00	1.41	0.64	1.17	0.84	1.82	10/01/2000
ESTIMATED INVESTMENT FEES			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Short Term BERS - NET MGR			0.89	1.40	1.41	0.01	0.07	0.44	2.00	1.41	0.64	1.17	0.84		
344 Cash Account	0	0.00													
346 Securities Lending	0	0.00													

**New York City
Board of Education Retirement System**

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail

Net Returns Through December 31, 2022

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2021	2020	2019	2018	2017
EQUITY SUMMARY										
US EQUITY										
Wasatch-US SCG	\$67	0.84	6.99	1.12	(31.14)	19.39	38.80			
RUSSELL 2000 GROWTH DAILY			4.13	4.38	(26.36)	2.83	34.63			
Excess			2.86	(3.26)	(4.78)	16.56	4.17			
BlackRock US SCG R2000	\$0	0.00	4.07	4.37	(26.38)	3.35	34.42	28.39	(9.14)	22.26
RUSSELL 2000 GROWTH DAILY			4.13	4.38	(26.36)	2.83	34.63	28.48	(9.31)	22.17
Excess			(0.06)	(0.02)	(0.02)	0.51	(0.21)	(0.09)	0.17	0.09
BlackRock US SCV R2000	\$63	0.80	8.26	3.39	(14.51)	28.48	4.87	22.60	(12.79)	7.34
RUSSELL 2000 VALUE DAILY			8.42	3.42	(14.48)	28.27	4.63	22.39	(12.86)	7.84
Excess			(0.16)	(0.03)	(0.03)	0.21	0.24	0.20	0.08	(0.49)
Wellington US MCC	\$214	2.70	9.90	5.09	(22.53)	10.07	25.12	32.68	(7.37)	25.06
S&P MID CAP 400			10.78	8.05	(13.06)	24.76	13.66	26.20	(11.08)	16.24
Excess			(0.89)	(2.96)	(9.47)	(14.69)	11.46	6.48	3.71	8.82
BlackRock US LMC R1000 Core	\$1,340	16.89	7.14	2.04	(19.95)	26.64	20.97	31.36		
RUSSELL 1000 (DAILY)			7.24	2.30	(19.13)	26.45	20.96	31.43		
Excess			(0.10)	(0.26)	(0.82)	0.18	0.00	(0.07)		
SSGA-US LC Russell TOP 200 Core	\$580	7.31	6.56	1.32	(20.15)	27.50	22.40	31.66		
RUSSELL TOP 200 INDEX (DAILY)			6.56	1.22	(19.77)	27.90	22.37	31.75		
Excess			(0.00)	0.10	(0.39)	(0.40)	0.03	(0.09)		
FUND OF FUNDS										
BERS-TOTAL FUNDS OF FUNDS	\$16	0.20	5.80	4.70	(16.20)	25.02	19.38	23.33	(8.27)	
RUSSELL 2000 (DAILY)			6.23	3.91	(20.44)	14.82	19.96	25.52	(11.01)	
Excess			(0.43)	0.80	4.23	10.20	(0.58)	(2.20)	2.74	

Public Markets Manager Performance Detail

Net Returns Through December 31, 2022

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2021	2020	2019	2018	2017
BERS-TOTAL LEGATO	\$16	0.20	5.80	4.70	(16.20)	25.02	19.38	23.33	(8.27)	
RUSSELL 2000 (DAILY)			6.23	3.91	(20.44)	14.82	19.96	25.52	(11.01)	
Excess			(0.43)	0.80	4.23	10.20	(0.58)	(2.20)	2.74	
NON - US EQUITY										
Sprucegrove WorldxUS LMCC	\$290	3.65	16.11	6.13	(14.43)	8.01	5.35	17.55	(13.67)	27.15
NYC Developed Value Benchmark ^[1]			16.18	5.50	(14.29)	12.62	7.59	22.49	(14.09)	22.77
Excess			(0.07)	0.63	(0.14)	(4.61)	(2.24)	(4.94)	0.42	4.38
Baillie Gifford WorldxUS LMCC	\$274	3.45	11.70	1.55	(38.20)	(7.53)	66.99	36.64	(15.35)	44.17
NYC Developed Growth Benchmark ^[2]			16.18	5.50	(14.29)	12.62	7.59	22.49	(14.09)	27.77
Excess			(4.49)	(3.95)	(23.91)	(20.15)	59.40	14.15	(1.26)	16.40
Acadian WorldxUS SCC	\$78	0.99	16.77	5.59	(17.95)	21.67	15.96	21.82	(19.22)	38.38
S&P EPAC Small Cap USD NET			17.12	3.80	(22.69)	8.06	13.78	23.71	(18.58)	33.47
Excess			(0.34)	1.80	4.74	13.61	2.18	(1.89)	(0.65)	4.91
Alger EAFE SCC	\$28	0.35	17.22	6.31	(21.66)	11.94	9.76			
MSCI EAFE SMALL CAP NET (DAILY)			15.79	4.41	(21.39)	10.10	12.34			
Excess			1.43	1.90	(0.27)	1.84	(2.59)			
EMERGING MARKETS										
Acadian EM	\$272	3.43	11.83	(3.18)	(20.75)	4.96	10.72	15.71	(17.27)	40.45
MSCI EMERGING MARKETS			9.70	(2.99)	(20.09)	(2.54)	18.31	18.42	(14.57)	37.28
Excess			2.12	(0.18)	(0.66)	7.50	(7.59)	(2.71)	(2.70)	3.16
JP Morgan AM-EM ACG	\$126	1.59	11.85	(0.64)	(27.80)					
MSCI EMERGING MARKETS			9.70	(2.99)	(20.09)					
Excess			2.15	2.35	(7.71)					
BlackRock MSCI EM Core	\$2	0.02	10.22	(2.85)	(19.57)	(2.10)	17.27	18.76	(14.45)	37.25
MSCI EMERGING MARKETS			9.70	(2.99)	(20.09)	(2.54)	18.31	18.42	(14.57)	37.28
Excess			0.52	0.15	0.52	0.44	(1.04)	0.34	0.12	(0.03)

Public Markets Manager Performance Detail

Net Returns Through December 31, 2022

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2021	2020	2019	2018	2017
INTERNATIONAL FOF										
BERS-TOTAL INTERNATIONAL FOF	\$69	0.87	13.52	3.53	(17.43)	8.90	16.60	22.25	(14.53)	
MSCI ACWI ex USA IMI Net			14.15	3.09	(16.58)	8.53	11.12	21.63	(14.76)	
Excess			(0.63)	0.44	(0.85)	0.37	5.48	0.62	0.23	
BERS-TOTAL INTERNATIONAL XPONANCE										
BERS-TOTAL INTERNATIONAL XPONANCE	\$69	0.87	13.52	3.53	(17.43)	8.90	16.60	22.25	(14.53)	
MSCI ACWI ex USA IMI Net			14.15	3.09	(16.58)	8.53	11.12	21.63	(14.76)	
Excess			(0.63)	0.44	(0.85)	0.37	5.48	0.62	0.23	
GLOBAL EQUITY										
Morgan Stanley-Global	\$55	0.69	5.25	1.88	(40.28)	0.63	58.66	38.03		
MSCI AC WORLD (Daily Const)			9.76	2.28	(18.36)	18.54	16.25	26.60		
Excess			(4.51)	(0.40)	(21.92)	(17.91)	42.41	11.44		
Fiera-Global	\$76	0.96	12.33	5.18	(18.27)	26.21	20.57	33.97		
MSCI World Index			9.77	2.97	(18.14)	21.82	15.90	27.67		
Excess			2.57	2.21	(0.13)	4.39	4.66	6.30		
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
BlackRock Mortgages	\$227	2.86	1.55	(3.50)	(11.81)	(0.79)	4.42	6.93	1.00	3.06
NYC Custom Mortgage Benchmark ⁽³⁾			2.14	(3.32)	(11.81)	(1.04)	3.91	6.68	1.01	2.47
Excess			(0.59)	(0.17)	0.01	0.26	0.52	0.25	(0.01)	0.59
Semper-Mortgages - Bivium	\$33	0.42								
Bloomberg US Mortgage Backed Securities										
Excess										
T Rowe Price-Corporate	\$225	2.83	3.24	(2.09)	(16.68)					
Bloomberg U.S. Corporate Inv Grade			3.63	(1.61)	(15.76)					
Excess			(0.39)	(0.48)	(0.92)					

Public Markets Manager Performance Detail

Net Returns Through December 31, 2022

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2021	2020	2019	2018	2017
SSGA LI Treasury	\$40	0.50	(0.94)	(7.87)	(21.24)	(3.60)	12.59	10.57	(0.18)	4.92
NYC - Treasury Agency Plus Five			0.02	(7.25)	(20.58)	(3.78)	12.85	10.40	(0.05)	4.66
Excess			(0.96)	(0.62)	(0.66)	0.17	(0.26)	0.17	(0.12)	0.27
New Century-LI Treasury - Bivium	\$33	0.42								
NYC - Treasury Agency Plus Five										
Excess										
SSGA IT Treasury 1-10Y	\$181	2.28	0.88	(2.21)	(7.75)	(1.73)	5.73			
USBIG TSY AGN 1-10			0.87	(2.31)	(7.79)	(1.66)	5.72			
Excess			0.00	0.10	0.03	(0.07)	0.02			
SSGA ST Treasury 1-3Y	\$149	1.88	0.70	(0.80)	(3.66)	(0.60)	3.05	3.56	1.51	0.45
FTSE US Government Bond 1-3 Years Index			0.69	(0.88)	(3.74)	(0.58)	3.09	3.56	1.56	0.42
Excess			0.00	0.08	0.08	(0.02)	(0.04)	0.00	(0.05)	0.03
SSGA LT Treasury 10Y Plus	\$49	0.62	(1.40)	(11.07)	(29.51)					
FTSE US Government Bond 10+ Years Index			(1.24)	(11.39)	(29.75)					
Excess			(0.17)	0.32	0.24					
Integrity-Credit - Bivium	\$34	0.43								
Bloomberg U.S. Corporate Inv Grade										
Excess										
HIGH YIELD										
Mackay Shields High Yield	\$362	4.56	4.18	3.56	(8.60)	5.42	8.00	13.85		
Bloomberg U.S. HY - 2% Issuer Cap			4.17	3.50	(11.18)	5.26	7.05	14.32		
Excess			0.01	0.06	2.58	0.16	0.95	(0.47)		
Nomura High Yield	\$356	4.48	4.61	4.06	(10.57)	6.49	8.22	13.74		
Bloomberg U.S. HY - 2% Issuer Cap			4.17	3.50	(11.18)	5.26	7.05	14.32		
Excess			0.45	0.56	0.61	1.23	1.17	(0.58)		

Public Markets Manager Performance Detail

Net Returns Through December 31, 2022

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2021	2020	2019	2018	2017
BANK LOANS										
Barings Bank Loans	\$0	0.00					1.12	7.82	0.38	4.47
CSFB LEVERAGED LOAN INDEX							2.78	8.17	1.14	4.25
Excess							(1.66)	(0.36)	(0.76)	0.22
TIPS										
SSGA TIPS	\$280	3.53	1.93	(3.35)	(11.92)	5.93	11.06	8.44	(1.29)	3.04
Bloomberg Global Infl-Linked: U.S. TIPS			2.04	(3.21)	(11.85)	5.96	10.99	8.43	(1.26)	3.01
Excess			(0.11)	(0.14)	(0.07)	(0.03)	0.07	0.02	(0.03)	0.04
CORE FI-DEVELOPING MANAGERS										
Pugh-CorePlus	\$111	1.40	1.86	(2.72)	(13.31)	(1.32)				
Bloomberg U.S. Aggregate			1.87	(2.97)	(13.01)	(1.54)				
Excess			(0.01)	0.25	(0.30)	0.23				
ECONOMICALLY TARGETED INVESTMENTS										
RBC Access MBS	\$9	0.12	1.67	(3.37)	(12.00)	(1.03)	6.14	7.21	0.49	2.64
Access RBC Benchmark			1.64	(2.97)	(10.38)	(1.46)	4.69	6.05	1.17	1.96
Excess			0.04	(0.40)	(1.61)	0.43	1.45	1.16	(0.69)	0.69
AFL-CIO Housing Investment Trust	\$16	0.20	0.92	(4.10)	(13.55)	(1.04)	6.20	7.78	0.16	3.17
Bloomberg U.S. Aggregate			1.87	(2.97)	(13.01)	(1.54)	7.51	8.72	0.01	3.54
Excess			(0.95)	(1.13)	(0.54)	0.50	(1.31)	(0.94)	0.15	(0.38)
CPC Construction Facility	\$3	0.04	1.79	2.24	3.80	3.89	0.67	6.87	4.14	6.05
CPC CONST BENCHMARK			1.28	2.33	3.75	2.42	2.73	4.09	3.99	3.34
Excess			0.50	(0.09)	0.04	1.47	(2.06)	2.78	0.15	2.72
BOA PPAR FNMA	\$1	0.01	1.60	0.40	(8.50)	(1.89)	6.12	13.54	2.33	5.21
FNMA Plus 85bps			2.59	(2.67)	(11.28)	(0.37)	5.14	7.80	1.86	3.61
Excess			(0.98)	3.07	2.78	(1.52)	0.98	5.74	0.47	1.60

Public Markets Manager Performance Detail

Net Returns Through December 31, 2022

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2021	2020	2019	2018	2017
Citibank PPAR FNMA	\$2	0.02	1.27	(0.55)	(11.34)	(1.56)	7.06	19.71	2.63	5.26
FNMA Plus 85bps			2.59	(2.67)	(11.28)	(0.37)	5.14	7.80	1.86	3.61
Excess			(1.32)	2.12	(0.06)	(1.19)	1.92	11.91	0.77	1.65
Citibank PPAR GNMA	\$0	0.00	1.83	0.60	(5.04)	(1.10)	8.31	5.33	1.90	3.10
GNMA Plus 65bps			2.43	(2.62)	(10.14)	(0.82)	4.31	6.73	1.63	2.53
Excess			(0.60)	3.22	5.10	(0.29)	4.00	(1.41)	0.27	0.57
CFSB PPAR FNMA	\$0	0.00	1.17	(0.90)	(12.29)	(2.05)				
FNMA Plus 85bps			2.59	(2.67)	(11.28)	(0.37)				
Excess			(1.42)	1.78	(1.01)	(1.67)				
CFSB PPAR GNMA	\$0	0.00	1.32	0.08	(5.29)	0.03	8.01	5.91	0.99	3.83
GNMA Plus 65bps			2.43	(2.62)	(10.14)	(0.82)	4.31	6.73	1.63	2.53
Excess			(1.11)	2.70	4.85	0.84	3.69	(0.82)	(0.65)	1.30
CPC PPAR FNMA	\$1	0.02	1.29	(0.46)	(10.21)	1.14	7.00	13.18	2.31	5.06
FNMA Plus 85bps			2.59	(2.67)	(11.28)	(0.37)	5.14	7.80	1.86	3.61
Excess			(1.29)	2.21	1.07	1.51	1.87	5.38	0.45	1.45
ECLF PPAR FNMA	\$0	0.00	1.22	(0.75)	(11.97)	(1.65)				
FNMA Plus 85bps			2.59	(2.67)	(11.28)	(0.37)				
Excess			(1.37)	1.93	(0.69)	(1.28)				
JPMC PPAR FNMA	\$3	0.04	0.41	(1.34)	(11.48)	(1.84)	8.33	14.68	1.68	9.96
FNMA Plus 85bps			2.59	(2.67)	(11.28)	(0.37)	5.14	7.80	1.86	3.61
Excess			(2.17)	1.34	(0.21)	(1.47)	3.19	6.88	(0.18)	6.35
LIIF PPAR FNMA	\$2	0.02	1.33	0.73	(9.29)	(1.75)	6.44	16.35	2.27	9.55
FNMA Plus 85bps			2.59	(2.67)	(11.28)	(0.37)	5.14	7.80	1.86	3.61
Excess			(1.26)	3.41	1.99	(1.37)	1.30	8.55	0.41	5.94

Public Markets Manager Performance Detail

Net Returns Through December 31, 2022

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2021	2020	2019	2018	2017
LIIF PPAR GNMA	\$0	0.00	1.20	0.60	(2.79)	0.84	6.19	5.54	2.53	2.52
GNMA Plus 65bps			2.43	(2.62)	(10.14)	(0.82)	4.31	6.73	1.63	2.53
Excess			(1.23)	3.22	7.35	1.65	1.87	(1.19)	0.89	(0.01)
LISC PPAR FNMA	\$0	0.01	(2.35)	(5.95)	(16.45)	(1.69)	31.93	14.95		
FNMA Plus 85bps			2.59	(2.67)	(11.28)	(0.37)	5.14	7.80		
Excess			(4.93)	(3.28)	(5.17)	(1.32)	26.80	7.15		
NCBCI PPAR FNMA	\$0	0.00	1.40	0.30	(4.39)	0.66	8.49	4.08	2.00	1.75
FNMA Plus 85bps			2.59	(2.67)	(11.28)	(0.37)	5.14	7.80	1.86	3.61
Excess			(1.19)	2.98	6.89	1.03	3.36	(3.72)	0.15	(1.86)
NCBCI PPAR GNMA	\$0	0.00	1.28	0.25	(4.17)	0.95	8.16	3.69	1.23	3.01
GNMA Plus 65bps			2.43	(2.62)	(10.14)	(0.82)	4.31	6.73	1.63	2.53
Excess			(1.15)	2.87	5.97	1.77	3.85	(3.04)	(0.41)	0.48
Wells Fargo PPAR FNMA	\$1	0.01	1.53	(0.52)	(11.70)	(1.86)	28.61	21.71		
FNMA Plus 85bps			2.59	(2.67)	(11.28)	(0.37)	5.14	7.80		
Excess			(1.06)	2.16	(0.42)	(1.48)	23.48	13.91		
CASH										
Short Term BERS	\$90	1.13	0.89	1.40	1.41	0.07	0.44	2.00	1.92	1.10
ICE BofA US 3-Month Treasury Bill			0.84	1.31	1.46	0.05	0.67	2.28	1.87	0.86
Excess			0.05	0.09	(0.05)	0.02	(0.23)	(0.28)	0.05	0.24
Cash Account	\$0	0.00								
Securities Lending	\$0	0.00								

**New York City
Board of Education Retirement System**

Appendix C

Alternative Assets Manager Performance Detail

Alternative Assets Manager Performance Detail

Through September 30, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
TOTAL PRIVATE EQUITY		1,570,079,650	987,058,560	710,125,460	889,599,917	1.62	14.4%
TOTAL ACTIVE							
Mesirow Financial Private Equity Partnership Fund III	2005	57,000,000	56,233,273	90,939,616	5,078,158	1.71	8.3%
Mesirow Financial Private Equity Partnership Fund IV	2006	25,000,000	24,342,233	41,966,368	4,785,921	1.92	11.0%
New York Fairview Private Equity Fund	2006	19,000,000	17,700,307	23,292,563	-	1.32	4.9%
Mesirow Financial Private Equity Partnership Fund V	2008	45,000,000	42,539,326	74,294,625	27,223,994	2.39	17.2%
Platinum Equity Capital Partners III	2011	15,000,000	14,651,714	27,501,167	3,130,635	2.09	36.1%
<u>NYCBERS - 2012 Emerging Manager Program</u>	<u>2012</u>	<u>14,650,000</u>	<u>15,275,999</u>	<u>22,854,369</u>	<u>9,946,595</u>	<u>2.15</u>	<u>17.4%</u>
Warburg Pincus Private Equity XI	2012	25,000,000	25,374,629	32,733,262	9,191,606	1.65	11.2%
Apollo Investment Fund VIII	2013	20,000,000	19,168,785	20,139,400	8,388,641	1.49	10.2%
ASF VI B	2013	15,000,000	12,327,890	15,951,741	2,200,736	1.47	12.4%
Carlyle Partners VI	2013	20,000,000	21,643,185	31,905,219	10,621,827	1.96	16.0%
Landmark - NYC Fund I	2013	6,000,000	5,497,541	6,377,230	3,248,790	1.75	16.0%
Landmark Equity Partners XV	2013	19,000,000	15,251,966	17,631,084	4,115,079	1.43	12.3%
ASF VI B NYC Co-Invest	2014	5,000,000	4,271,181	5,226,617	1,196,845	1.50	12.5%
Bridgepoint Europe V	2014	8,857,553	8,144,269	11,158,194	4,605,215	1.94	18.8%
Carlyle Partners VI - Side Car	2014	2,200,000	1,604,408	2,001,780	1,425,761	2.14	13.8%
Crestview Partners III	2014	15,000,000	13,486,057	6,810,432	14,896,411	1.61	14.0%
Crestview Partners III (Co-Investment B)	2014	5,000,000	5,181,674	250,760	6,506,678	1.30	5.3%
CVC Capital Partners VI	2014	20,037,822	19,695,499	18,878,402	18,243,457	1.88	16.5%
Lexington Capital Partners VIII	2014	20,000,000	18,161,156	17,210,348	13,072,175	1.67	17.6%
Vista Equity Partners Fund V	2014	25,000,000	31,062,004	36,563,352	32,017,282	2.21	20.1%
ASF VII B	2015	10,000,000	6,446,145	4,671,776	5,996,639	1.66	18.0%
ASF VII B NYC Co-Invest	2015	6,000,000	4,169,194	3,862,552	3,421,807	1.75	19.7%
Centerbridge Capital Partners III	2015	2,500,000	3,259,635	2,853,359	2,692,176	1.70	19.8%
EQT VII	2015	17,715,106	19,742,696	27,189,853	9,830,216	1.88	22.5%
<u>NYCBERS - 2015 Emerging Manager Program</u>	<u>2015</u>	<u>30,750,000</u>	<u>29,054,067</u>	<u>10,115,331</u>	<u>40,314,508</u>	<u>1.74</u>	<u>23.5%</u>
Siris Partners III	2015	3,500,000	3,609,330	2,708,159	2,884,673	1.55	13.5%
Warburg Pincus Private Equity XII	2015	21,500,000	21,519,010	17,970,561	27,141,494	2.10	20.3%
Welsh, Carson, Anderson & Stowe XII	2015	10,000,000	9,374,663	11,446,601	12,005,659	2.50	28.5%
American Securities Partners VII	2016	8,000,000	7,801,484	3,073,932	11,477,153	1.87	16.9%
Apax IX	2016	13,000,000	14,022,820	13,064,205	15,320,697	2.02	24.9%

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail

Through September 30, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
BCEC X Metro Co-Investment	2016	4,433,361	4,609,611	1,194,720	6,487,514	1.67	14.2%
Bridgepoint Europe V Co-Invest	2016	2,952,518	2,666,140	5,511,436	1,494,817	2.63	27.1%
Platinum Equity Capital Partners IV	2016	11,500,000	11,354,886	10,762,833	13,532,760	2.14	27.7%
Vista Equity Partners Fund VI	2016	16,000,000	19,857,390	16,350,581	22,395,844	1.95	19.5%
Ares Corporate Opportunities Fund V	2017	10,000,000	10,797,730	4,721,625	10,114,813	1.37	11.3%
BC European Capital X	2017	11,083,403	10,674,335	1,543,383	12,286,550	1.30	7.8%
CVC Capital Partners VII	2017	19,077,331	17,313,693	2,514,484	24,058,650	1.53	20.7%
Green Equity Investors VII	2017	10,000,000	9,559,556	5,785,943	14,771,554	2.15	25.1%
KKR Americas Fund XII	2017	16,000,000	15,416,825	5,864,194	20,674,087	1.72	23.1%
Palladium Equity Partners V	2017	10,000,000	6,284,754	1,090,289	6,497,304	1.21	8.2%
Warburg Pincus Financial Sector	2017	13,000,000	13,082,652	5,001,187	18,503,852	1.80	24.5%
Apollo Investment Fund IX	2018	32,000,000	26,020,515	8,530,662	27,113,412	1.37	24.9%
ASF VIII B	2018	21,000,000	10,041,606	1,848,821	13,468,042	1.53	31.6%
Bridgepoint Europe VI	2018	15,388,972	11,307,079	1,111,261	13,323,316	1.28	15.7%
EQT VIII	2018	14,145,141	12,633,603	7,740,797	13,714,955	1.70	27.6%
EQT VIII (Co-Invest)	2018	4,914,264	4,682,934	3,452,711	5,576,778	1.93	39.5%
ICG Strategic Equity Fund III	2018	13,340,000	9,594,114	3,202,383	14,587,795	1.85	48.6%
Lexington Capital Partners IX	2018	12,375,000	8,353,565	2,266,138	10,987,600	1.59	44.6%
Platinum Equity Capital Partners IV Co-Investment	2018	1,050,000	1,052,043	209,317	1,748,151	1.86	18.1%
Platinum Equity Small Cap Fund	2018	10,000,000	7,288,160	1,762,477	10,224,073	1.64	27.8%
Siris Partners IV	2018	10,000,000	8,100,324	1,180,041	11,399,504	1.55	21.8%
Vista Equity Partners Fund VII	2018	20,500,000	16,493,718	187,542	21,958,871	1.34	15.0%
Apax X	2019	12,500,000	7,062,252	786,310	7,419,984	1.16	16.0%
ASF VIII B NYC Co-Invest	2019	10,500,000	4,169,164	758,216	5,901,319	1.60	55.0%
Bridgepoint Europe VI Co-Invest	2019	3,847,243	2,700,240	-	3,895,186	1.44	19.0%
KKR European Fund V (USD)	2019	9,950,000	8,614,772	1,672,511	7,948,492	1.12	7.9%
<u>NYCBERS - 2019 Emerging Manager Program</u>	<u>2019</u>	<u>23,916,666</u>	<u>13,598,905</u>	<u>431,319</u>	<u>20,677,957</u>	<u>1.55</u>	<u>25.2%</u>
Warburg Pincus Global Growth	2019	15,000,000	13,138,580	108,750	17,523,161	1.34	17.4%
WCAS XIII	2019	10,000,000	8,447,578	940,734	10,340,874	1.34	29.5%
Clearlake Capital Partners VI	2020	10,000,000	10,118,739	837,638	14,062,685	1.47	34.3%
Crestview IV Co-Invest	2020	2,666,667	1,242,644	361,751	1,700,949	1.66	69.7%
Crestview Partners IV	2020	8,000,000	3,727,919	931,905	4,563,757	1.47	50.8%
EQT IX	2020	19,643,000	17,323,864	1,785,834	17,632,638	1.12	12.1%

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail

Through September 30, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
EQT IX (Co-Invest)	2020	5,357,000	5,318,799	89,323	5,513,334	1.05	4.4%
FTV VI	2020	3,500,000	3,290,000	-	5,514,957	1.68	38.9%
ICG Strategic Equity Co-Investment Fund III	2020	4,444,119	3,284,658	1,803,936	3,697,861	1.67	38.2%
KKR Asian Fund IV	2020	25,000,000	7,861,685	69,250	7,429,491	0.95	-5.9%
Lexington IX Co-Invest	2020	4,125,000	2,021,456	699,214	2,628,127	1.65	48.2%
Lindsay Goldberg V	2020	10,500,000	4,749,884	1,432,421	5,015,398	1.36	32.5%
NYC-Northbound Emerging Managers Program	2020	25,000,000	6,434,812	143,372	7,848,659	1.24	35.6%
Valor Equity Partners V	2020	3,500,000	2,873,541	-	3,914,559	1.36	28.3%
Apax XI	2021	25,000,000	-	-	-	0.00	n.m.
Clearlake Capital Partners VII	2021	30,000,000	10,344,778	730	10,171,192	0.98	-2.0%
CVC Capital Partners VIII	2021	25,532,300	8,169,761	-	8,411,213	1.03	4.0%
Grain Communications Opportunity Fund III	2021	3,000,000	1,677,525	2,409	1,459,408	0.87	-17.0%
HarbourVest Centre Street Co-Investment Fund	2021	23,000,000	10,016,391	-	9,685,165	0.97	-4.4%
ICG Strategic Equity Co-Investment Fund IV	2021	10,000,000	5,552,437	-	5,963,067	1.07	10.3%
ICG Strategic Equity Fund IV	2021	20,000,000	5,950,458	1,314,758	6,608,343	1.33	20.2%
Insight Partners XII	2021	18,750,000	11,072,808	20,720	9,117,204	0.83	-22.2%
Insight Partners XII Buyout Annex Fund	2021	6,250,000	3,437,500	-	3,202,416	0.93	-8.6%
KKR Americas Fund XIII	2021	31,000,000	6,870,511	-	5,688,581	0.83	-21.2%
One Rock Capital Partners III	2021	25,000,000	16,696,795	2,559,255	16,633,703	1.15	23.2%
Permira VIII	2021	23,700,600	-	-	(423)	0.00	n.m.
PSG V	2021	23,000,000	7,998,753	708,102	7,214,956	0.99	-1.7%
Reverence Capital Partners Opportunities Fund V (FOO) (PE F	2021	7,000,000	1,589,664	1,913	1,576,487	0.99	-0.8%
Reverence Capital Partners Opportunities Fund V (PE Fund III	2021	18,000,000	4,344,176	4,920	4,132,944	0.95	-5.5%
Stellax Capital Partners II	2021	25,000,000	8,433,329	827	9,472,714	1.12	12.9%
Vistria Fund IV	2021	13,000,000	7,991,228	183,232	8,038,507	1.03	5.5%
EQT X	2022	18,750,000	-	-	(154,134)	0.00	n.m.
EQT X (Co-Invest)	2022	6,250,000	-	-	-	0.00	n.m.
FTV VII	2022	23,831,980	6,434,635	-	6,170,026	0.96	-5.3%
FTV VII Co-Invest	2022	5,362,200	1,549,080	-	1,549,080	1.00	0.0%
Green Equity Investors IX	2022	19,875,000	-	-	-	0.00	n.m.
Green Equity Investors IX Co-Invest	2022	6,625,000	-	-	-	0.00	n.m.
Hg Genesis 10	2022	11,363,339	42,676	-	33,508	0.79	n.m.
Hg NYC Co-Invest	2022	4,166,667	1,366,520	-	1,363,279	1.00	-0.5%

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail

Through September 30, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Hg Saturn 3	2022	8,333,333	42,237	-	(20,902)	(0.49)	n.m.
Lexington Capital Partners X Co-Invest	2022	7,500,000	879,475	-	1,070,150	1.22	27.3%
Nordic Capital XI	2022	14,130,300	-	-	-	0.00	n.m.
Nordic N11 Co-Investment	2022	5,905,434	-	-	-	0.00	n.m.
Raine Partners IV	2022	5,333,333	-	-	-	0.00	n.m.
Thoma Bravo XV	2022	20,250,000	6,194,909	428	6,115,062	0.99	-1.6%
Thoma Bravo XV Co-Invest	2022	6,750,000	2,728,586	-	2,711,134	0.99	-0.8%
TPG Rise Climate	2022	8,333,334	1,154,319	-	1,020,971	0.88	-16.9%
TPG Rise Climate Co-Invest	2022	16,666,666	2,743,142	-	2,894,295	1.06	7.5%
Welsh, Carson, Anderson & Stowe XIV	2022	30,000,000	-	-	(333,002)	0.00	n.m.
Welsh, Carson, Anderson & Stowe XIV N Co-Invest	2022	10,000,000	-	-	-	0.00	n.m.
Lexington Capital Partners X	2023	22,500,000	-	-	674,514	0.00	n.m.

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail

Through September 30, 2022

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL PRIVATE REAL ESTATE			1,130,300,297	841,121,295	447,355,390	754,119,342	1.43	11.8%
TOTAL PRIVATE REAL ESTATE								
LaSalle Property Fund	2010	Core Portfolio	38,600,000	38,600,000	15,757,940	65,540,198	2.11	10.8%
Trumbull Property Fund	2011	Core Portfolio	41,400,000	64,288,100	80,953,011	26,539,803	1.67	7.9%
NYC Asset Investor #2	2013	Core Portfolio	11,000,000	11,187,179	4,748,101	8,712,203	1.20	3.4%
MetLife Core Property Fund	2014	Core Portfolio	15,000,000	15,000,000	5,505,427	25,937,936	2.10	11.2%
USAA Eagle Real Estate Feeder 1	2015	Core Portfolio	18,000,000	20,545,540	2,638,328	26,745,232	1.43	8.2%
Brookfield Premier Real Estate Partners	2016	Core Portfolio	25,000,000	28,993,848	3,993,848	42,391,744	1.60	16.2%
Exeter Core Industrial Club Fund II	2016	Core Portfolio	10,000,000	9,739,474	3,966,118	19,099,771	2.37	22.9%
Jamestown Premier Property Fund	2016	Core Portfolio	6,246,307	7,350,836	2,965,797	5,186,302	1.11	2.8%
NYCRS Artemis Mach II	2016	Core Portfolio	11,000,000	12,847,020	15,227,129	5,225,739	1.59	17.2%
Heitman Core Real Estate Debt Income Trust	2017	Core Portfolio	25,000,000	28,507,534	3,682,281	28,372,753	1.12	6.3%
Lion Industrial Trust	2017	Core Portfolio	18,000,000	23,997,538	4,744,249	49,880,453	2.28	22.2%
Almanac Realty Securities VIII	2018	Core Portfolio	10,500,000	5,790,594	1,376,743	5,543,834	1.20	13.1%
Almanac Realty Securities VIII (Sidecar II)	2018	Core Portfolio	7,000,000	3,988,130	1,031,338	4,228,395	1.32	20.7%
Artemis Real Estate Partners Income and Growth Fund	2018	Core Portfolio	10,000,000	6,758,155	1,903,568	5,464,995	1.09	6.1%
Exeter Industrial Core Fund III	2019	Core Portfolio	12,700,000	12,480,346	1,212,091	13,180,484	1.15	11.3%
Harrison Street Core Property Fund	2019	Core Portfolio	80,000,000	81,538,682	1,254,666	84,996,269	1.06	9.5%
HSRE-Centre Street Core Co-Investment	2019	Core Portfolio	5,000,000	4,799,345	339,669	6,454,324	1.42	16.5%
Cortland Growth and Income	2020	Core Portfolio	10,000,000	11,091,757	1,091,757	16,587,930	1.59	25.8%
LaSalle GPS Co-Investment Program – Core	2021	Core Portfolio	10,000,000	6,123,246	124,854	6,768,988	1.13	n.m.
RREEF America REIT II	2021	Core Portfolio	17,000,000	17,000,000	593,319	21,634,634	1.31	n.m.
RREEF Core Plus Industrial Fund	2021	Core Portfolio	25,000,000	25,436,764	436,764	31,062,943	1.24	n.m.
EQT Exeter Industrial Core-Plus Fund IV	2022	Core Portfolio	40,000,000	3,856,000	-	3,498,415	0.91	n.m.
Franklin Templeton Private Real Estate Fund	2011	Non-Core Portfolio	30,000,000	35,998,165	48,374,586	952,482	1.37	19.2%
Brookfield Strategic Real Estate Partners	2012	Non-Core Portfolio	10,000,000	12,126,419	20,593,991	3,447,998	1.98	18.9%
Blackstone Real Estate Partners Europe IV (USD)	2013	Non-Core Portfolio	32,500,000	32,554,806	40,766,065	5,961,524	1.44	11.7%
NYC Asset Investor #1	2013	Non-Core Portfolio	10,000,000	12,815,975	7,369,296	6,277,598	1.06	1.3%
NYC Asset Investor #3	2013	Non-Core Portfolio	8,000,000	5,739,456	1,533,343	6,080,337	1.33	5.4%
Carlyle Realty Partners VII	2014	Non-Core Portfolio	25,000,000	23,214,708	27,875,096	6,215,433	1.47	13.0%
H/2 Special Opportunities III	2014	Non-Core Portfolio	15,000,000	15,577,770	15,563,998	3,975,185	1.25	7.5%
Blackstone Real Estate Partners VIII	2015	Non-Core Portfolio	16,500,000	18,708,114	19,237,134	13,461,315	1.75	17.8%
European Property Investors Special Opportunities 4	2015	Non-Core Portfolio	11,227,018	10,226,724	4,222,349	9,267,738	1.32	7.4%
PW Real Estate Fund III	2015	Non-Core Portfolio	11,203,575	8,751,528	5,156,707	19,527,384	2.82	30.7%
DivcoWest Fund V	2016	Non-Core Portfolio	10,000,000	7,975,361	2,918,909	7,277,860	1.28	7.3%
H/2 Special Opportunities IV	2016	Non-Core Portfolio	10,000,000	10,076,908	2,347,475	9,532,114	1.18	5.9%
Westbrook Real Estate Co-Investment Partnership X	2016	Non-Core Portfolio	10,000,000	9,696,784	8,524,559	3,700,366	1.26	10.9%
DRA Growth and Income Fund IX	2017	Non-Core Portfolio	10,000,000	10,947,276	10,128,323	7,634,468	1.62	19.1%
Exeter Industrial Value Fund IV	2017	Non-Core Portfolio	10,000,000	9,400,559	19,241,680	1,394,811	2.20	30.9%
Lone Star Real Estate Fund V	2017	Non-Core Portfolio	11,000,804	7,685,879	4,030,003	2,846,174	0.89	-5.8%
NYCRS-KKR CMBS Retention Partners	2017	Non-Core Portfolio	13,000,001	12,094,048	4,535,452	10,750,977	1.26	6.7%
Pramerica Real Estate Capital VI	2017	Non-Core Portfolio	10,325,370	10,827,921	8,849,338	3,490,316	1.14	7.3%
Aermont Capital Real Estate Fund IV	2018	Non-Core Portfolio	9,839,522	6,154,451	-	4,775,913	0.78	-14.8%

Information provided by the New York City Retirement Systems Consultants. Interim returns are subject to change and may differ due to differences in accounting and performance methodologies.

Alternative Assets Manager Performance Detail

Through September 30, 2022



	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Brookfield Strategic Real Estate Partners III	2018	Non-Core Portfolio	12,000,000	10,240,539	2,508,014	10,731,074	1.29	13.8%
KKR Real Estate Partners Americas II	2018	Non-Core Portfolio	10,000,000	10,339,531	12,711,467	4,038,351	1.62	27.8%
Blackstone Real Estate Partners IX	2019	Non-Core Portfolio	15,000,000	14,842,000	4,690,329	17,069,143	1.47	34.5%
Greenoak Asia (USD) III	2019	Non-Core Portfolio	10,000,000	7,994,907	5,274,788	3,509,423	1.10	12.6%
Westbrook Real Estate Fund XI	2019	Non-Core Portfolio	10,000,000	4,580,785	1,777,139	3,585,015	1.17	n.m.
DivcoWest Fund VI	2020	Non-Core Portfolio	10,000,000	4,065,206	163,275	4,019,636	1.03	n.m.
Exeter Industrial Value Fund V	2020	Non-Core Portfolio	5,000,000	3,500,000	-	5,548,003	1.59	n.m.
KKR Real Estate Partners Europe II	2020	Non-Core Portfolio	9,950,000	6,645,426	1,429,300	6,106,302	1.13	16.8%
KKR Real Estate Securities Dislocation Opportunity Co-Investment	2020	Non-Core Portfolio	10,000,000	5,990,633	6,739,640	695,496	1.24	n.m.
Rialto Real Estate Fund IV - Debt	2020	Non-Core Portfolio	25,000,000	14,380,457	1,878,758	13,694,825	1.08	n.m.
Almanac Realty Securities IX	2021	Non-Core Portfolio	23,330,000	3,411,525	-	3,126,968	0.92	n.m.
Artemis Real Estate Partners Healthcare Fund II	2021	Non-Core Portfolio	15,000,000	2,371,921	553,631	1,587,992	0.90	n.m.
BIG Real Estate Fund II	2021	Non-Core Portfolio	25,000,000	11,849,307	3,147,987	8,736,901	1.00	n.m.
Brookfield Strategic Real Estate Partners IV	2021	Non-Core Portfolio	39,000,000	6,332,825	-	6,995,441	1.10	n.m.
KKR Real Estate Partners Americas III	2021	Non-Core Portfolio	35,000,000	20,100,563	1,347,209	20,025,315	1.06	n.m.
LaSalle GPS Co-investment Program - Non-Core	2021	Non-Core Portfolio	15,000,000	5,444,907	171,885	5,750,342	1.09	n.m.
Mesirow Financial Real Estate Value Fund IV	2021	Non-Core Portfolio	25,000,000	8,537,825	146,667	9,470,895	1.13	n.m.
Aermont Capital Real Estate Fund V	2022	Non-Core Portfolio	34,307,700	-	-	(201,962)	-	n.m.
Almanac Realty Securities IX (Sidecar II)	2022	Non-Core Portfolio	11,670,000	-	-	6,841	-	n.m.
Blackstone Real Estate Partners X	2023	Non-Core Portfolio	40,000,000	-	-	-	-	n.m.
EQT Exeter Industrial Value Fund VI	2023	Non-Core Portfolio	40,000,000	-	-	-	-	n.m.

Information provided by the New York City Retirement Systems Consultants. Interim returns are subject to change and may differ due to differences in accounting and performance methodologies.

Alternative Assets Manager Performance Detail

Through September 30, 2022

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL INFRASTRUCTURE		527,578,586	264,076,074	116,462,331	234,545,689	1.33	11.99%
TOTAL INFRASTRUCTURE							
Brookfield Infrastructure Fund II	2013	10,000,000	10,068,051	10,204,892	8,433,932	1.85	13.01%
Global Energy & Power Infrastructure Fund II	2014	15,000,000	16,389,949	16,121,734	5,517,728	1.32	15.22%
IFM Global Infrastructure Fund	2014	15,000,000	20,027,335	9,073,785	26,854,760	1.79	10.97%
KKR Global Infrastructure Investors II	2014	19,000,000	20,702,336	27,573,146	9,121,484	1.77	17.53%
Actis Energy 4	2016	10,600,000	9,720,122	8,834,468	5,587,000	1.48	14.73%
ASF VII Infrastructure	2016	12,000,000	8,144,734	3,079,518	9,094,748	1.49	17.24%
Brookfield Infrastructure Fund III	2016	10,000,000	6,790,773	2,536,477	6,825,597	1.38	9.64%
Global Infrastructure Partners III	2016	12,000,000	11,939,941	4,005,700	13,150,200	1.44	10.22%
Axiom Infrastructure North America	2017	12,221,338	12,718,850	3,547,068	13,239,700	1.32	8.52%
EQT Infrastructure III	2017	9,214,756	10,254,185	14,349,377	4,406,173	1.83	20.64%
NYCRS EIG Energy Partners	2017	11,760,000	7,072,311	3,607,913	4,415,147	1.13	7.41%
Cardinal NR Sidecar Holdings	2018	1,880,001	1,892,698	625,014	2,733,842	1.77	17.50%
EQT Infrastructure IV - USD Fund	2018	18,000,000	16,021,678	2,960,272	16,593,680	1.22	10.45%
Global Infrastructure Partners IV	2018	22,600,000	14,442,039	10,727	15,190,867	1.05	6.15%
KKR Global Infrastructure Investors III	2018	15,600,000	13,482,548	3,342,055	10,494,161	1.03	1.52%
Ardian Infrastructure Fund V B	2019	14,737,491	7,587,460	332,295	7,731,351	1.06	5.59%
Brookfield Infrastructure Fund IV	2019	19,000,000	15,492,997	2,365,266	16,945,100	1.25	13.07%
Brookfield Infrastructure Fund IV (BIF IV): Co-Invest	2019	2,000,000	2,008,481	212,225	2,749,903	1.47	15.42%
Global Energy & Power Infrastructure Fund III F	2019	15,600,000	11,078,643	1,906,445	11,063,465	1.17	11.93%
Actis Energy 5	2020	27,000,000	1,258,152	-	(164,000)	-0.13	n.m.
EQT Infrastructure IV Co-Investment (Saber)	2020	1,600,000	1,616,000	97,112	1,977,355	1.28	10.54%
EQT Infrastructure V	2020	32,000,000	15,546,768	1,339,141	14,204,919	1.00	n.m.
ASF VIII Infrastructure B	2021	40,000,000	4,701,451	41,030	4,941,028	1.06	n.m.
InfraVia European Fund V	2021	37,825,000	3,164,008	-	2,502,162	0.79	n.m.
KKR Global Infrastructure Investors IV	2021	35,000,000	9,136,808	125,464	7,593,537	0.84	n.m.
NYCRS EIG Energy Partners Co-Investment	2021	2,940,000	-	-	-	0.00	n.m.
Stonepeak Infrastructure Fund IV	2021	35,000,000	12,817,756	171,207	13,494,519	1.07	n.m.
BlackRock Global Infrastructure Fund IV D	2023	25,000,000	-	-	-	0.00	n.m.
Brookfield Infrastructure Fund V-B	2023	45,000,000	-	-	(152,668)	0.00	n.m.

Information provided by the New York City Board of Education Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2022

	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
TOTAL OPPORTUNISTIC FIXED INCOME		350,000,000	232,036,075	27,790,261	234,381,119	0.62%	11.64%
Apollo Centre Street Partnership, L.P.	2020	30,000,000	28,615,775	8,615,775	21,492,098	0.57%	5.41%
KKR-NYC Credit C L.P.	2020	30,000,000	21,110,689	1,049,567	20,169,105	0.00%	0.43%
Marathon Centre Street Partnership, L.P. - Asset Class	2020	20,000,000	21,720,000	6,420,000	20,880,482	-1.59%	13.37%
Marathon Centre Street Partnership, L.P. - Asset Class - Subsequent Commitment	2020	10,000,000	7,750,000	-	5,279,657	1.17%	-21.37%
OHA Centre Street Partnership, L.P.	2020	30,000,000	30,000,000	-	50,109,853	3.12%	25.12%
400 Capital Centre Street LP	2021	40,000,000	28,634,341	-	29,791,526	0.00%	4.48%
Torchlight Debt Fund VII, LP	2021	30,000,000	16,518,342	1,518,342	15,838,725	-0.60%	5.11%
Brightwood Capital Fund V, LP	2022	40,000,000	16,073,336	-	17,559,210	0.00%	11.25%
Centre Street CarVal Partnership LP	2022	40,000,000	10,000,000	-	10,124,427	1.57%	5.25%
ICG Centre Street Partnership, L.P.	2022	40,000,000	37,917,640	10,081,416	29,094,800	0.00%	9.04%
KLCP Domestic Fund III LP	2022	40,000,000	13,695,952	105,161	14,041,236	0.00%	9.09%

Information provided by Alpha Frontier
Above data is not final and subject to change

**New York City
Board of Education Retirement System**

Appendix D

Footnotes

General Notes

- Estimated management fees for public market investments are calculated on an accrual basis without adjustment for management fee caps. Alternative investment (Private Market) fees are recorded on a cash basis and are not inclusive of carried interest paid. Since not all alternative managers currently provide detailed fee disclosure, the alternative investment fees noted here are not comprehensive.
- Returns greater than 1 year are annualized.
- Public Market returns are Net of Manager Fees for periods after January 2014 and Gross of investment advisory fees for other periods unless otherwise indicated.
- Public market excess returns for periods prior to 2014 are based on Gross performance.

Page Specific

Page 13 - 18 - Portfolio Asset Allocation

- Rebalancing Ranges: the minimum and maximum weights that actual Asset Allocation may reach before rebalancing between Asset Classes is necessary.

Pages 19 - 21 - Performance Attribution: Total Plan

- Plan Return at Policy Weights: the return of the Total Plan assuming actual Asset Class results were maintained at target (Adjusted Policy) weights. *Figure = (Return of Asset Class 1 * Target Weight) plus (Return Of Asset Class 2 * Target Weight) plus (.....)*
- **Allocation Effect** = Total Plan Return minus Plan Return At Adjusted Policy Weights. Allocation is the Contribution to Performance resulting from an overweight or underweight to an asset class. E.g. an underweight to an Asset Class that under-performs results in a positive Allocation Effect and vice versa.
- **Selection Effect** = Equal to the Custom Benchmark (Adjusted Policy Index) Return minus Plan Return at Adjusted Policy Weights. This illustrates how the Managers have added or removed value based on their Security Selection decisions, e.g., *If the manager's Actual Returns are higher than the Implied Return there will be a positive Selection Effect.*
- **Policy Index = Custom Benchmark**
The "policy index" is a custom benchmark representing the weighted average return of the weighted benchmark indexes for each major investment program. Weights may reflect an adjustment of actual policy for outstanding commitments for new or revised programs, such as for private market programs, which are invested gradually, or for any new or updated program requiring the completion of RFPs and contracts. The policy index/custom benchmark is calculated monthly based on adjusted policy weights at the beginning of each month.



Through December 31, 2022

The indexes and most recent policy weights are as follows:

*U.S. Equity: Russell 3000 * 31.02%*

*International Developed (EAFE) Markets: MSCI World ex USA IMI Net * 9.07%*

*International Active – Global Equity: MSCI ACWI * 1.80%*

*Emerging Markets: MSCI Emerging Markets *5.60%*

*International Emerging Managers FOF: MSCI ACWI Ex US IMI Net * 0.85%*

*Private Equity: Russell 3000 + 300 b.p. per annum * 9.00%*

*Private Real Estate – Core: NFI - ODCE Net * 4.00%*

Private Real Estate – Non Core: NFI - ODCE Net + 200bps 2.67%*

*Infrastructure: CPI + 4% * 2.93%*

US Treasury Short Term: FTSE US Government Bond 1-3 Years Index 2.19%*

US Treasury Intermediate: USBIG TSY AGN 1-10 2.56%*

*Active Government: NYC Treasury Agency + 5 * 1.82%*

*US Treasury Long Duration: FTSE US Government Bond 10+ Years Index * 0.73%*

*Core FI-Developing Managers : Bloomberg U.S. Aggregate * 0.00%*

*Mortgage: Bloomberg US Mortgage Backed Securities * 4.87%*

*ETI: ETI Custom Benchmark * 0.49%*

*Investment Grade Corporate: NYC Custom IGC Benchmark * 5.25%*

*High Yield: Bloomberg U.S. HY - 2% Issuer Cap * 9.10%*



Through December 31, 2022

*Bank Loans: Credit Suisse Leveraged Loan * 0.00%*

*TIPS: Bloomberg Global Infl-Linked: U.S. TIPS * 3.27%*

*Opportunistic Fixed: OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum * 2.80%*

Page 22 – Allocation and Selection Effects - Asset Class Breakdown

- This chart aims to break down the Allocation and Selection Effects shown on the Performance Attribution pages. The aim of the Page is to show the asset classes where Managers are either out performing or underperforming their benchmark and to show the basis point effect that this is having on Plan performance.



Through December 31, 2022

[1] NYC Developed Value Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Value Net to MSCI World ex USA Net Index.

[2] NYC Developed Growth Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Growth to MSCI World ex USA Net Index.

[3] NYC Custom Mortgage Benchmark: Beginning 9.2020 benchmark changed from FTSE Mortgage Index to Bloomberg US Mortgage Backed Securities.

ETI Quarterly Report (Public):

BERS - Economically Targeted Investments Quarterly Report

Public/Private Apartment Rehabilitation Program (PPAR)

Lenders	Bank of America		Citi Community Development		Carver Federal Savings Bank		The Community Preservation Corp		JP Morgan Chase		Low Income Investment Fund		NCB Capital Impact *		Neighborhood Housing Service		Wells Fargo		Local Initiatives Support Corp		Enterprise Cmty Loan Fund		NYC HDC	
Contractual Commitment	\$4.00		\$4.00		\$1.00		\$4.00		\$5.00		\$4.00		\$0.00		\$1.00		\$2.00		\$1.00		\$1.00		\$2.00	
Current Market Value	\$0.59		\$2.09		\$0.15		\$1.20		\$3.43		\$1.76		\$0.08		\$0.00		\$0.79		\$0.44		\$0.00		\$0.00	
	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units
<u>Commitments Q4 (included in total)</u>																								
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$0.03	117	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.01	9	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	0.03	45	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$0.06	171	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
<u>Delivered Q4 (included in total)</u>																								
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$0.02	25	\$0.11	30	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.16	65	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.01	25	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.22	65	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	0.00	0	0.15	74	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$0.03	50	\$0.26	104	\$0.00	0	\$0.00	0	\$0.00	0	\$0.16	65	\$0.22	65	\$0.00	0	\$0.00	0
<u>Total Commitments</u>																								
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$0.41	1,000	\$0.57	201	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.28	90	\$0.11	101	\$0.00	0
Brooklyn	0.00	0	0.11	0	0.00	0	0.11	198	0.06	67	0.18	95	0.00	0	0.00	0	0.00	0	0.09	74	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.16	289	0.03	28	0.18	82	0.00	0	0.00	0	0.00	0	0.24	113	0.05	26	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.05	120	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	0.19	326	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.11	0	\$0.00	0	\$0.92	1,933	\$0.66	296	\$0.36	177	\$0.00	0	\$0.00	0	\$0.00	0	\$0.60	277	\$0.16	127	\$0.00	0
<u>Historical Investments</u>																								
Bronx	\$0.26	60	\$1.37	802	\$0.00	0	\$0.52	1,978	\$2.87	1,653	\$0.51	178	\$0.00	0	\$0.00	0	\$0.11	90	\$0.11	48	\$0.00	0	\$0.00	0
Brooklyn	0.28	54	0.87	481	0.00	0	0.56	1,818	0.33	226	0.71	401	0.00	0	0.00	0	0.25	130	0.16	82	0.22	360	0.00	0
Manhattan	0.34	100	0.24	283	0.21	236	0.30	1,353	0.33	333	1.28	498	0.10	123	0.00	0	0.48	203	0.22	65	0.00	0	0.00	0
Queens	0.84	293	0.04	54	0.00	0	0.05	120	0.27	164	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.04	67	0.00	0	0.00	0	0.00	0
Outside of NYC	0.09	39	0.21	41	0.00	0	0.29	724	0.38	197	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$1.81	546	\$2.73	1,661	\$0.21	236	\$1.72	5,993	\$4.18	2,573	\$2.50	1,077	\$0.10	123	\$0.00	0	\$0.88	490	\$0.49	195	\$0.22	360	\$0.00	0

Note: Dollar amount listed in millions

* NCB Capital Impact's Buy-Sell Agreement terminated effective 7/29/2014.

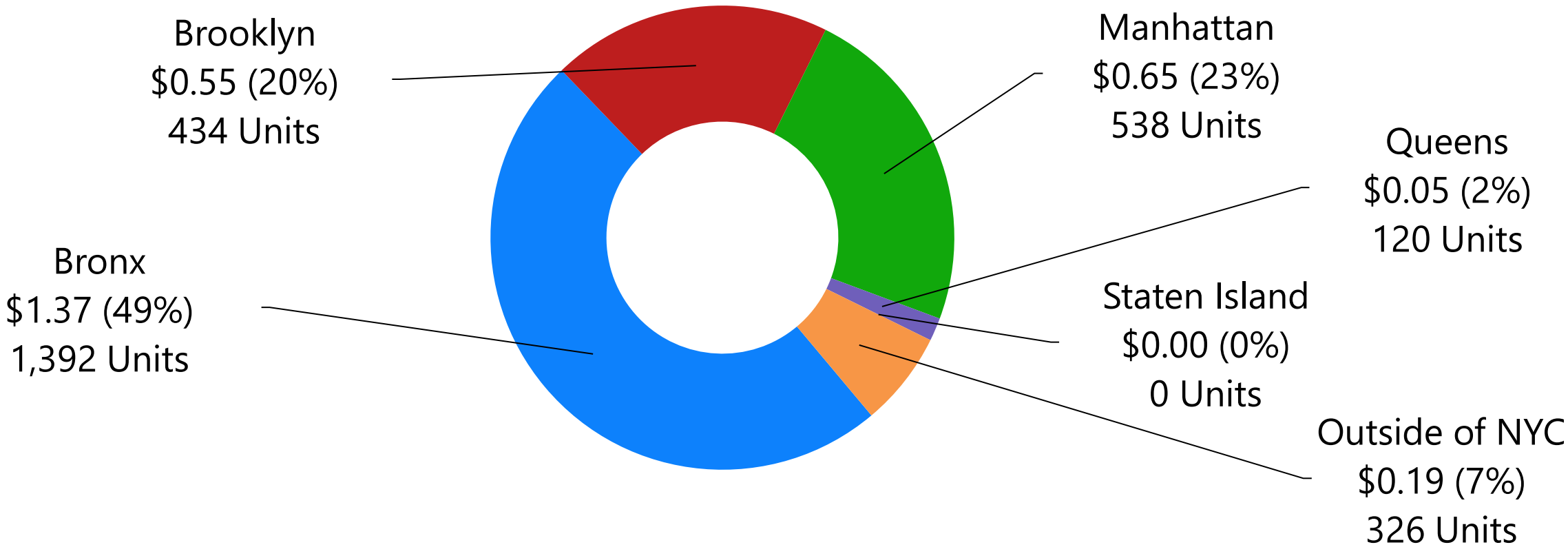
BERS - Economically Targeted Investments Quarterly Report

Public/Private Apartment Rehabilitation Program (PPAR)

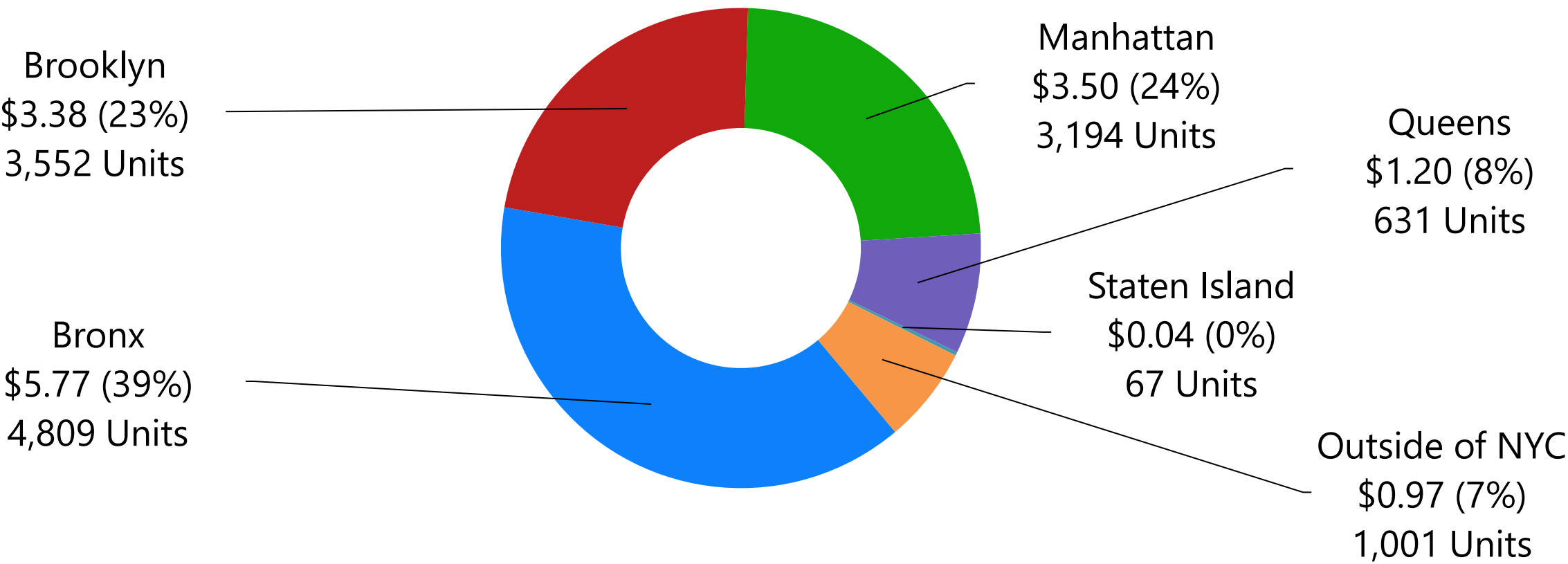
Lenders	All Lender Totals	
Contractual Commitment	\$29.00	
Current Market Value	\$10.53	
	Dollars	Units
Commitments Q4 (included in total)		
Bronx	\$0.03	117
Brooklyn	0.00	0
Manhattan	0.01	9
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	0.03	45
Total	\$0.06	171
Delivered Q4 (included in total)		
Bronx	\$0.13	55
Brooklyn	0.16	65
Manhattan	0.22	90
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	0.15	74
Total	\$0.65	284
Total Commitments		
Bronx	\$1.37	1,392
Brooklyn	0.55	434
Manhattan	0.65	538
Queens	0.05	120
Staten Island	0.00	0
Outside of NYC	0.19	326
Total	\$2.80	2,810
Historical Investments		
Bronx	\$5.77	4,809
Brooklyn	3.38	3,552
Manhattan	3.50	3,194
Queens	1.20	631
Staten Island	0.04	67
Outside of NYC	0.97	1,001
Total	\$14.85	13,254

Note: Dollar amount listed in millions

Current Commitments All PPAR Lenders



Historical Investments Since Inception All PPAR Lenders



BERS - Economically Targeted Investments Quarterly Report

AFL-CIO Housing Investment Trust (HIT)
Market Value \$15.80 million¹

NYC Community Investment Initiative (NYCCII)

Borough	NYCCII Phase I: 2002 - 2005		NYCCII Phase II: 2006 - 2013		Grand Total	
	Investments	Units ²	Investments	Units ²	Investments	Units ²
Bronx	\$27,600,000	2,010	\$52,827,900	761	\$80,427,900	2,771
Brooklyn	49,501,800	3,230	103,890,446	5,616	153,392,246	8,846
Manhattan	172,021,700	6,908	174,075,200	813	346,096,900	7,721
Queens	0	0	17,760,000	1,149	17,760,000	1,149
Staten Island	0	0	6,414,554	693	6,414,554	693
Outside NYC	0	0	100,000,000	137	100,000,000	137
Total	\$249,123,500	12,148	\$454,968,100	9,169	\$704,091,600	21,317

HIT Home Mortgage Program

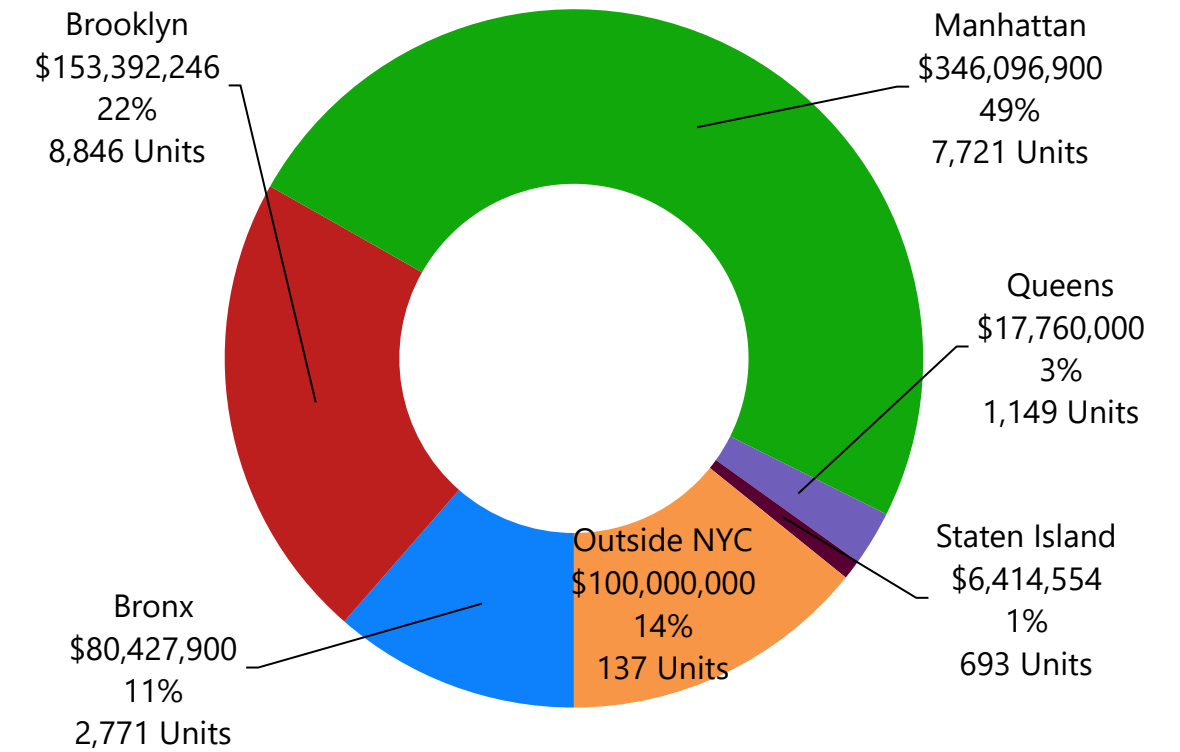
Borough	NYCCII Phase I: 2002 - 2005		NYCCII Phase II: 2006 - 2013		Grand Total	
	\$ Amount	Loans	\$ Amount	Loans	\$ Amount	Loans
Bronx	\$32,544,168	41	\$218,082,108	296	\$250,626,276	337
Brooklyn	116,575,736	138	864,892,271	1,115	981,468,007	1,253
Manhattan	10,742,253	12	214,244,680	265	224,986,933	277
Queens	82,399,317	64	894,399,418	973	976,798,735	1,037
Staten Island	106,039,089	191	359,980,460	439	466,019,549	630
Total	\$348,300,563	446	\$2,551,598,937	3,088	\$2,899,899,500	3,534

BERS Loans	Phase I:	0	Phase II:	13	Total:	13
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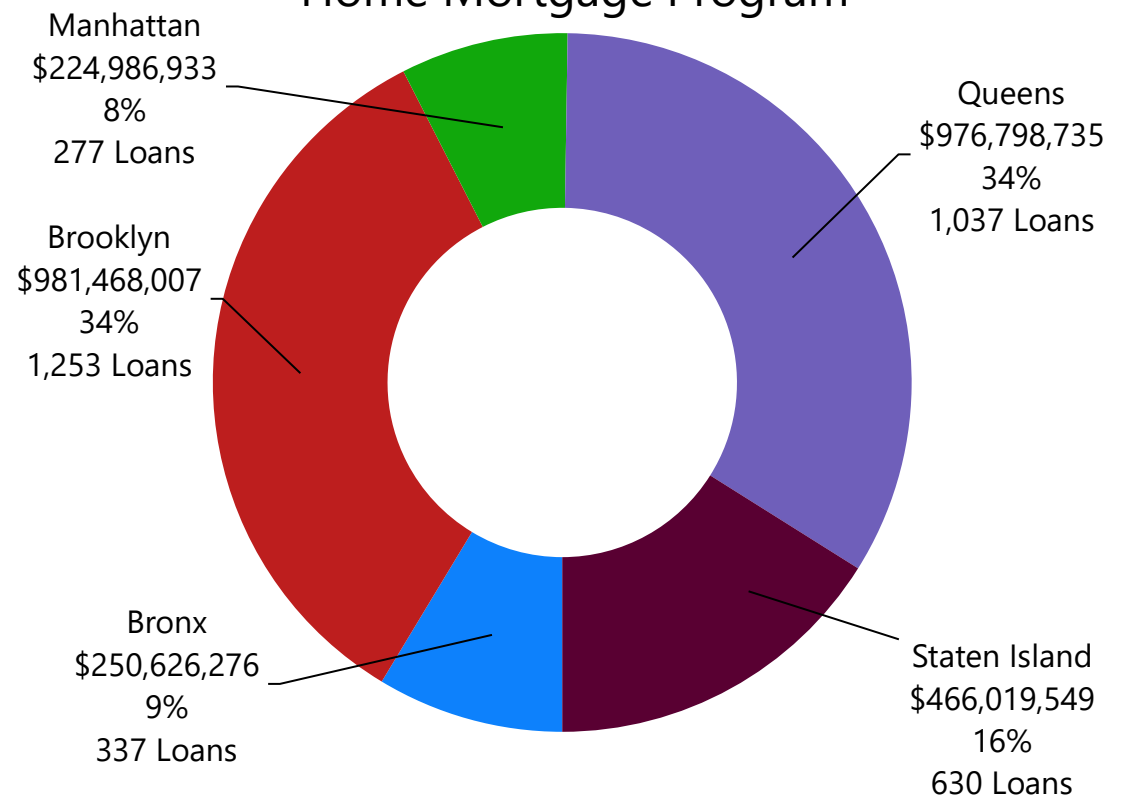
¹Interest is reinvested

²Low/Moderate Income Units

NYCCII Multifamily Program



Home Mortgage Program



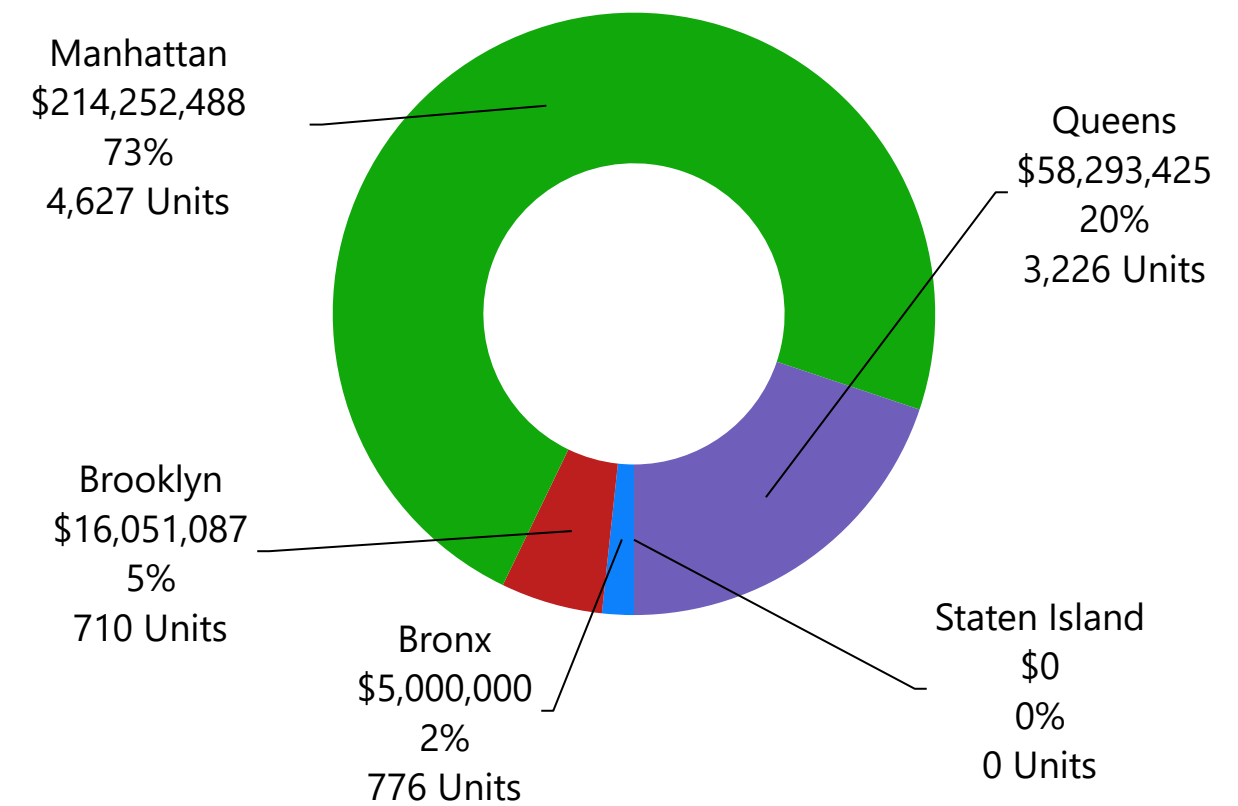
BERS - Economically Targeted Investments Quarterly Report

AFL-CIO Housing Investment Trust (HIT)

NYC Workforce Housing Investments: 2009 - 2015

Borough	Investments Since Inception	LMI Units Since Inception
Bronx	\$5,000,000	776
Brooklyn	16,051,087	710
Manhattan	214,252,488	4,627
Queens	58,293,425	3,226
Staten Island	0	0
Total	\$293,597,000	9,339

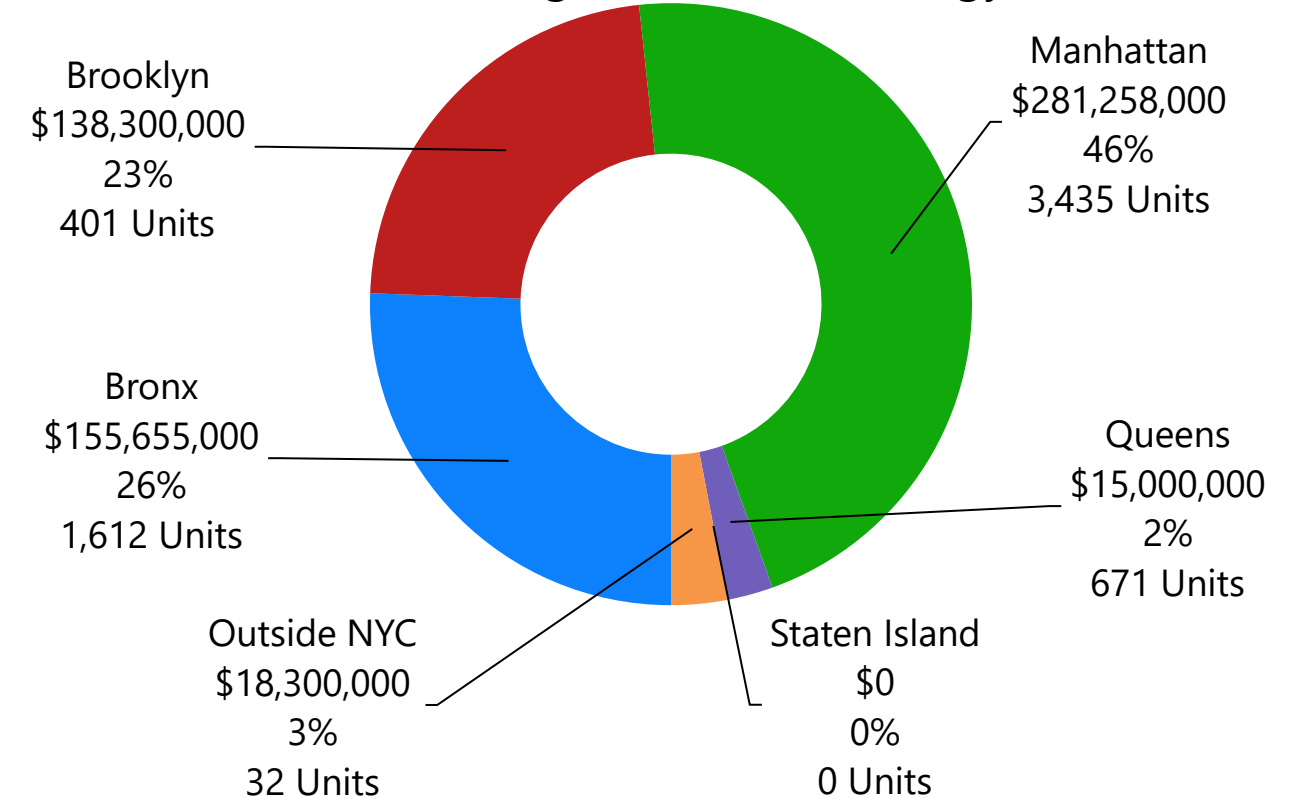
NYC Workforce Housing Investments



HIT Housing Investment Strategy: 2015 - Q4 2022

Borough	Q4 Investments	Investments Since Inception	Q4 Units	LMI Units Since Inception
Bronx	\$0	\$155,655,000	0	1,612
Brooklyn	0	138,300,000	0	401
Manhattan	0	281,258,000	0	3,435
Queens	0	15,000,000	0	671
Staten Island	0	0	0	0
Outside NYC	0	18,300,000	0	32
Total	\$0	\$608,513,000	0	6,151

HIT Housing Investment Strategy



BERS - Economically Targeted Investments Quarterly Report

RBC ACCESS CAPITAL STRATEGIES (Since Inception 2/1/07)

\$10.5 million Allocated (2.34% of total account)

Market Value \$9.24 million

Multifamily Investments Detail	\$ Invested ¹		Units ²	
	Q4	Total	Q4	Total
Bronx	\$0	\$3,311,542	0	19,969
Brooklyn	0	1,885,963	0	15,373
Manhattan	0	2,936,335	0	7,281
Queens	0	504,630	0	920
Staten Island	0	130,389	0	75
Total BERS Multifamily Investments	\$0	\$8,768,859	0	43,618
Multifamily Total All Systems	\$0	\$374,737,572	0	43,618

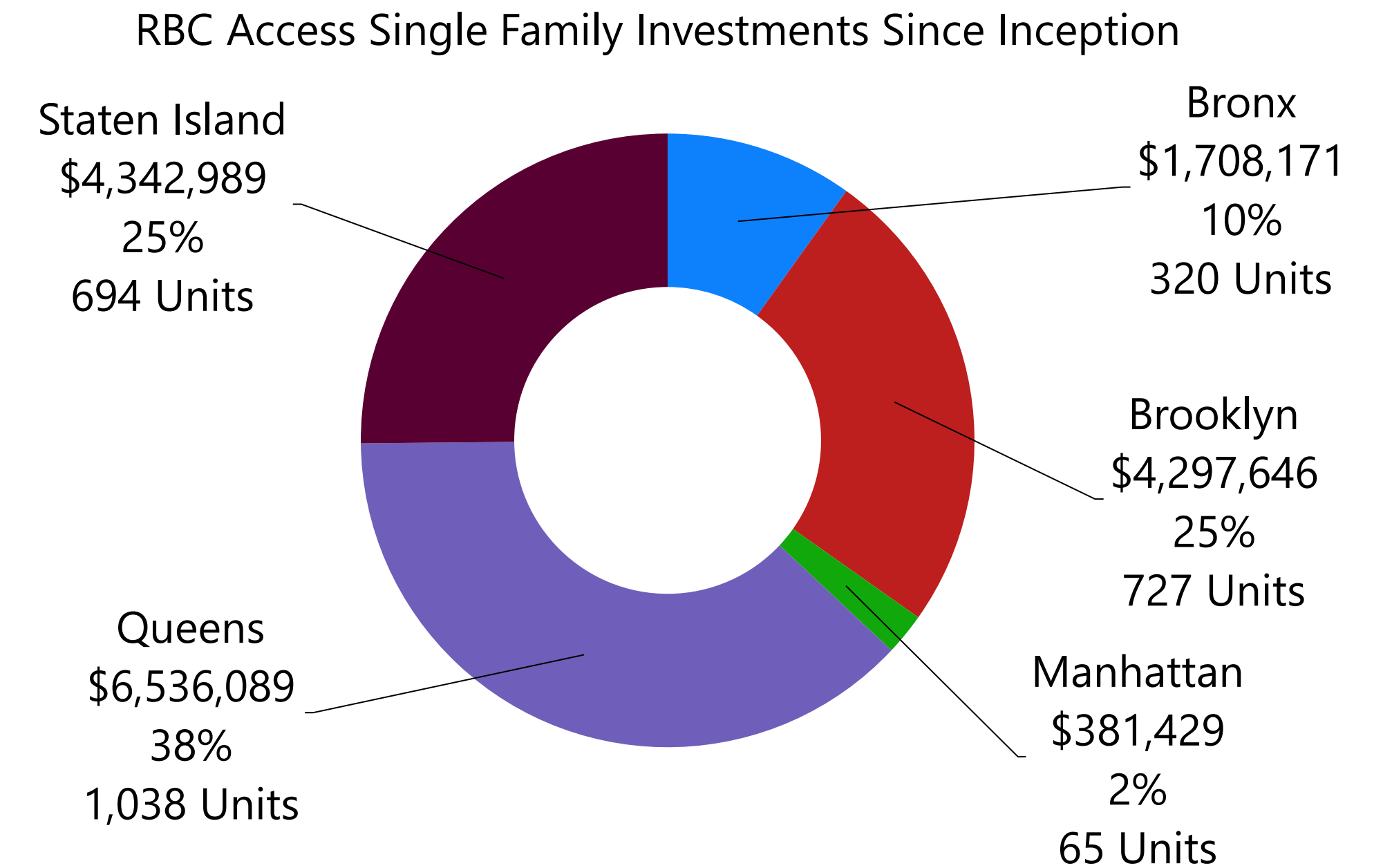
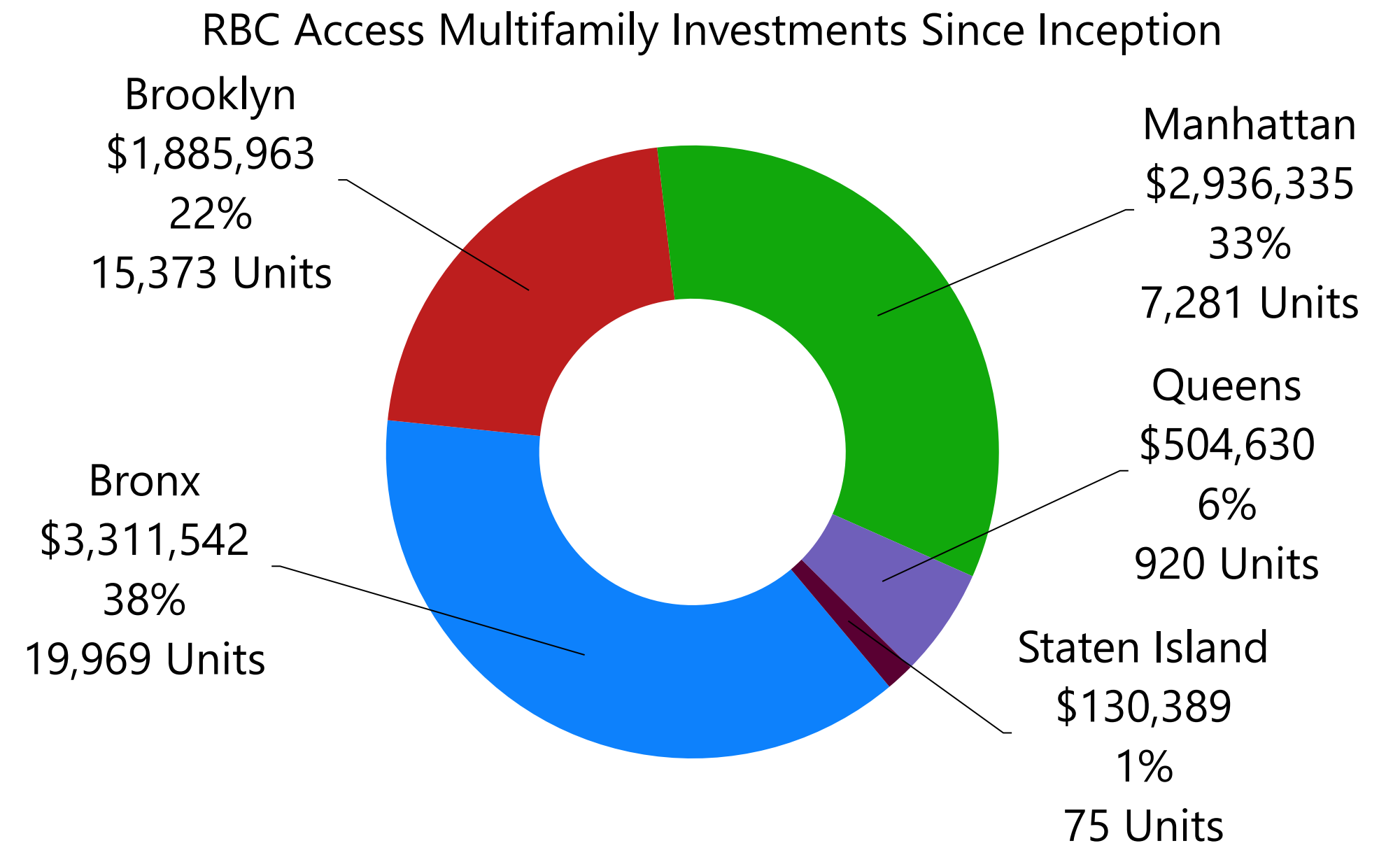
Single Family Investments Detail	\$ Invested		Units	
	Q4	Total	Q4	Total
Bronx	\$7,792	\$1,708,171	1	320
Brooklyn	0	4,297,646	0	727
Manhattan	0	381,429	0	65
Queens	0	6,536,089	0	1,038
Staten Island	0	4,342,989	0	694
Total BERS Single Family Investments	\$7,792	\$17,266,324	1	2,844
Single Family Total All Systems	\$333,000	\$737,877,099	1	2,844

Other Investments Detail	\$ Invested		Loans	
	Q4	Total	Q4	Total
Bronx	\$0	\$15,795	0	1
Brooklyn	0	126,135	0	8
Manhattan	0	56,930	0	5
Queens	0	12,716	0	3
Staten Island	0	0	0	0
Total BERS Other Investments	\$0	\$211,577	0	17
Other Investments Total All Systems	\$0	\$9,041,740	0	17

Grand Total BERS	\$7,792	\$26,246,760
Grand Total All Systems	\$333,000	\$1,121,656,410

¹ Certain bond investment amounts are allocated pro rata across boroughs based upon unit count.

² If not indicated otherwise, superintendent units are allocated based on building size.



BERS - Economically Targeted Investments Quarterly Report

ETI Real Estate Equity Investments

Total Market Value \$21.07 million

Hudson Market Value \$6.07 million

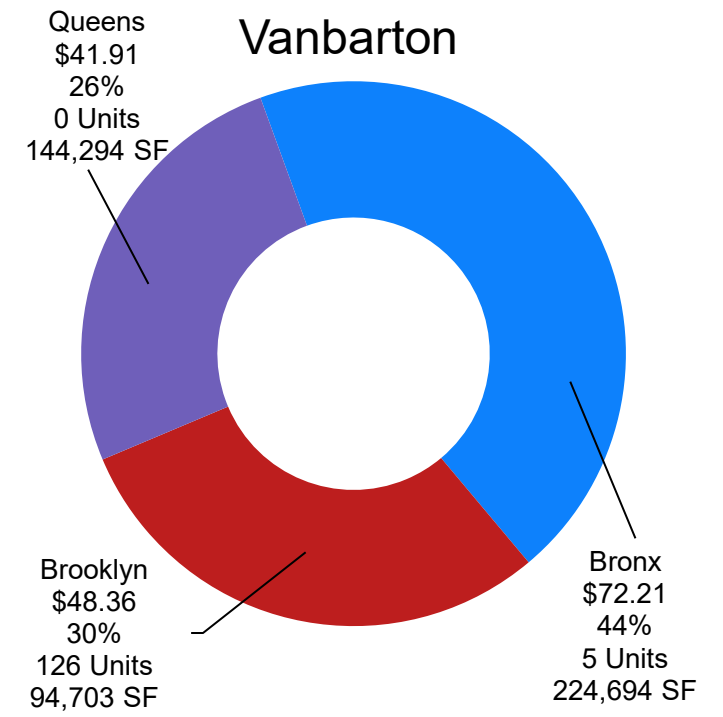
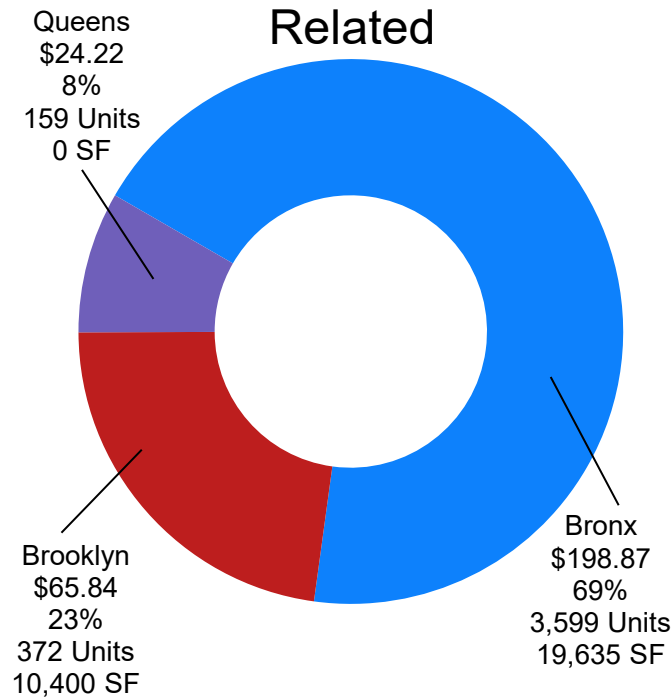
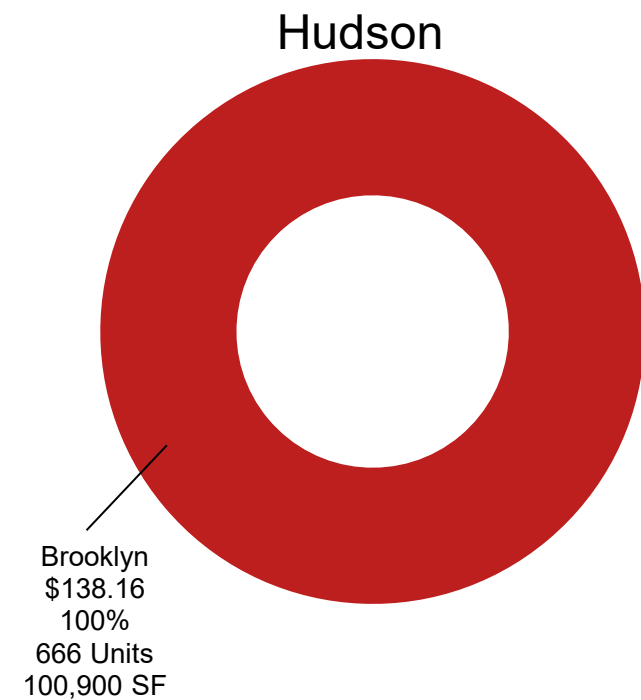
Borough	Gross Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$0.00	0	0	0
Brooklyn	138.16	666	666	100,900
Manhattan	0.00	0	0	0
Queens	0.00	0	0	0
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$138.16	666	666	100,900

Related Market Value \$8.71 million

	Gross Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$198.87	3,599	3,356	19,635
Brooklyn	65.84	372	212	10,400
Manhattan	0.00	0	0	0
Queens	24.22	159	151	0
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$288.93	4,130	3,719	30,035

Vanbarton (Emmes) Market Value \$6.29 million

	Gross Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$72.21	5	2	224,694
Brooklyn	48.36	126	61	94,703
Manhattan	0.00	0	0	0
Queens	41.91	0	0	144,294
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$162.48	131	63	463,691



*All information is derived from reports submitted by individual managers and State Street Bank, and is reported on a quarter lag. Performance has not been reviewed by consultants or custodial bank.

**Dollar amounts listed in millions.

Private Equity Quarterly Report (Public):

NYC Board of Education Retirement System

NYCBERS - PE

Portfolio Report

As Of September 2022

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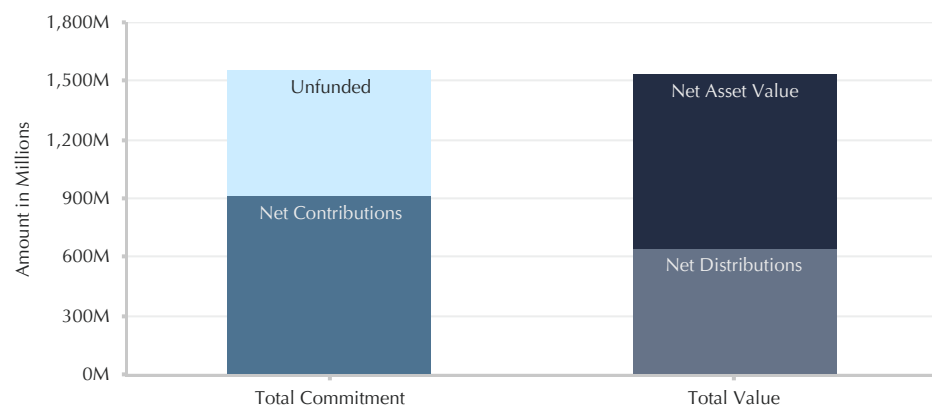
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Summary



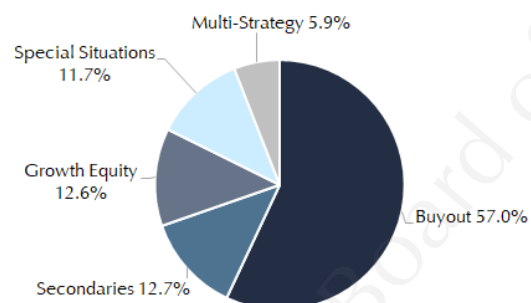
Portfolio Summary

Total Pension Assets	\$7.6 bn as of 09/30/2022				
GP Relationships	49				
Holdings	123				
# of New Investments within the quarter*	2				
# of Underlying Active Investments	1779				
% of Public Companies	7.3%				
Total Commitment Amount	\$1.6 bn				
Net Contributions	\$912.9 mm				
Net Distributions	\$639.7 mm				
Net Asset Value	\$889.6 mm				
Weighted Average Age	6.8Y				
Unfunded Commitment	\$642.5 mm				
Minimum Annual Pacing	250.0 mm				
Maximum Annual Pacing	420.0 mm				
Portfolio Allocation	11.7%				
Minimum Target Allocation	5.0%				
Maximum Target Allocation	13.0%				
1Y IRR	1.7%	2Y IRR	23.4%	3Y IRR	21.0%
5Y IRR	18.5%	7Y IRR	17.1%	10Y IRR	17.1%
ITD IRR**	14.4%	ITD TVPI**	1.6x		

* Jul-2022 - Sep-2022

** Mar-2006 - Sep-2022

Unfunded + NAV by Strategy



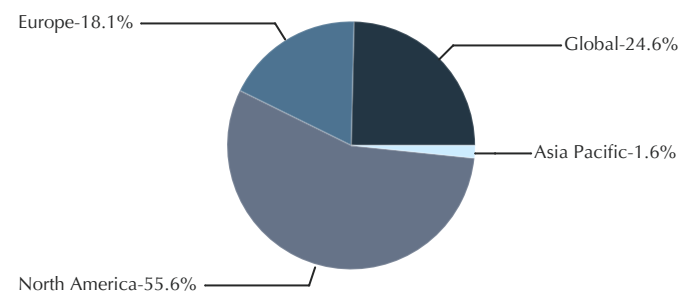
Position Analytics data based on GP provided information as of Sep-2022

IRR not meaningful for investments held less than 24 months

Weighted Average Age (WAA) is based on contributions

WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Unfunded + NAV by Region



Strategy Portfolio Summary

	# Of Funds	Weighted Average Age	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Unfunded + NAV (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Annualized IRR	TVPI
Buyout	72	5.2	481.7	813.0	391.6	873.3	457.0	245.0	18.5%	1.6x
Growth Equity	16	5.4	139.7	180.8	54.0	193.7	130.1	71.3	16.6%	1.6x
Multi-Strategy	5	13.2	54.6	194.0	36.5	91.1	157.3	230.6	10.3%	1.8x
Secondaries	17	6.1	98.8	206.8	95.4	194.3	116.0	82.8	18.3%	1.6x
Special Situations	13	5.7	114.7	175.6	65.0	179.7	126.7	80.4	21.1%	1.5x
NYCBERS - PE	123	6.8	889.6	1,570.1	642.5	1,532.1	987.1	710.1	14.4%	1.6x

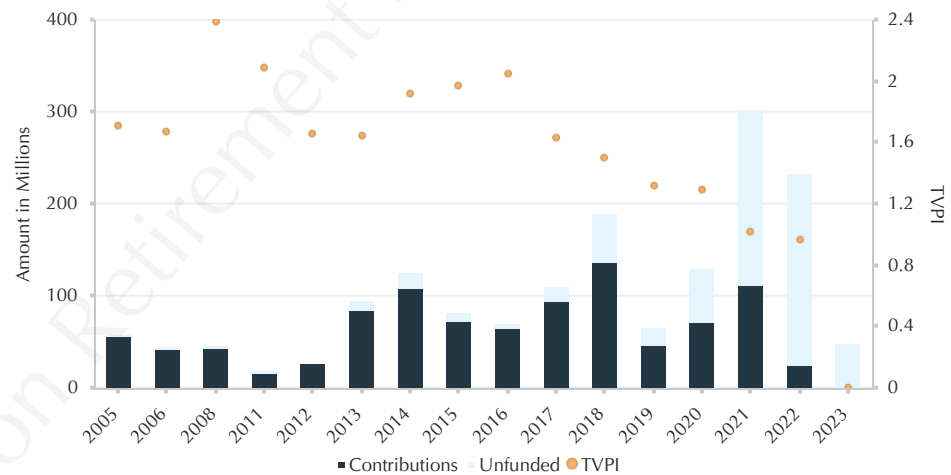
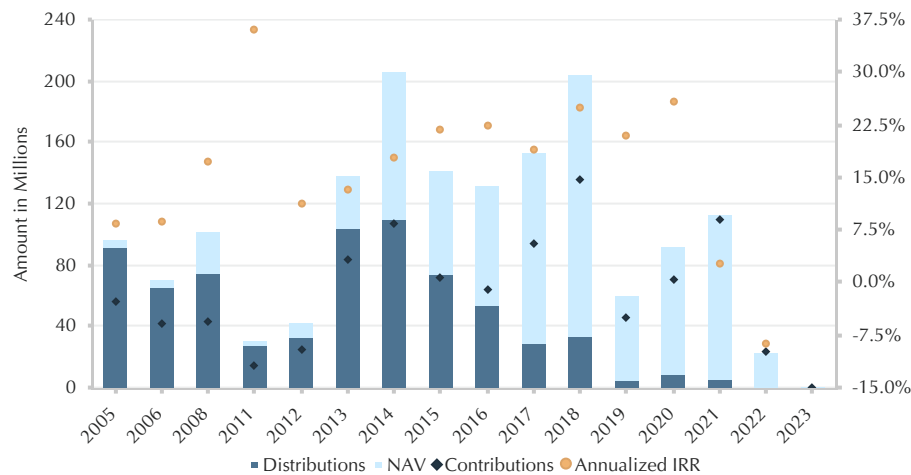
¹ IRR not meaningful for investments held less than 24 months

Investment Type Portfolio Summary

	# Of Funds	Weighted Average Age	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Unfunded + NAV (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Annualized IRR	TVPI
Direct Investments	95	7.0	806.0	1,390.9	543.6	1,349.7	907.0	678.2	14.3%	1.6x
Co-Investments	28	4.2	83.6	179.2	98.8	182.4	80.1	31.9	17.0%	1.4x
NYCBERS - PE	123	6.8	889.6	1,570.1	642.5	1,532.1	987.1	710.1	14.4%	1.6x

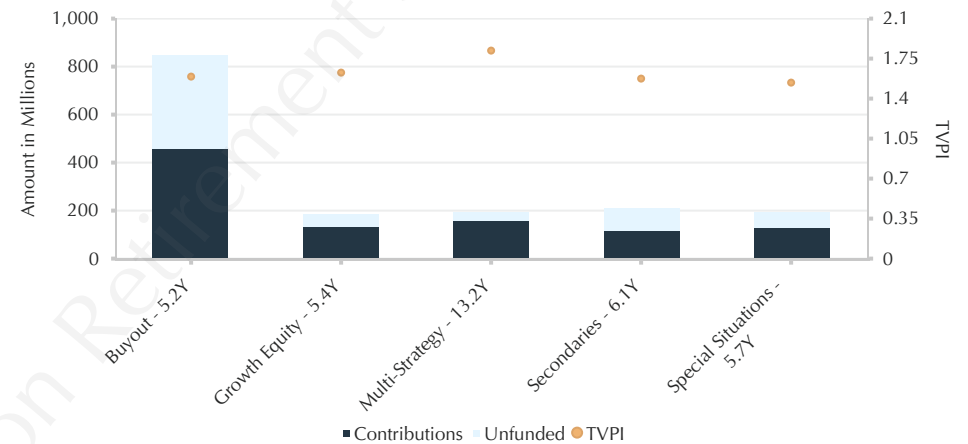
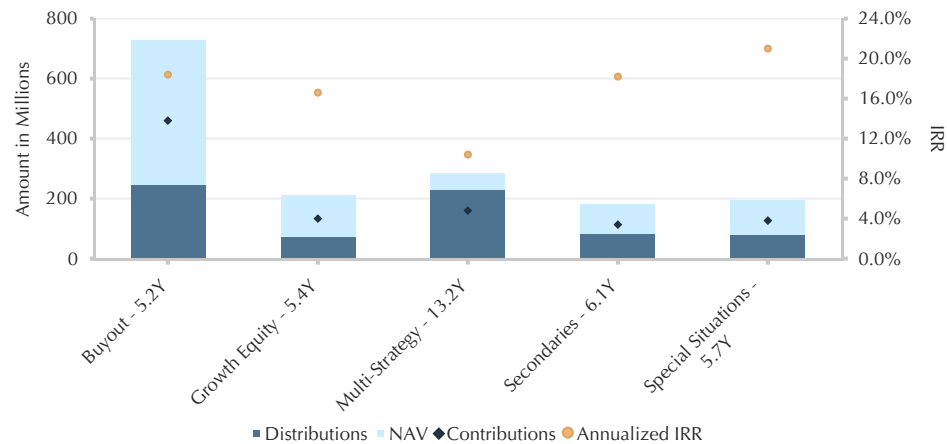
¹ IRR not meaningful for investments held less than 24 months

Performance Review by Vintage Year

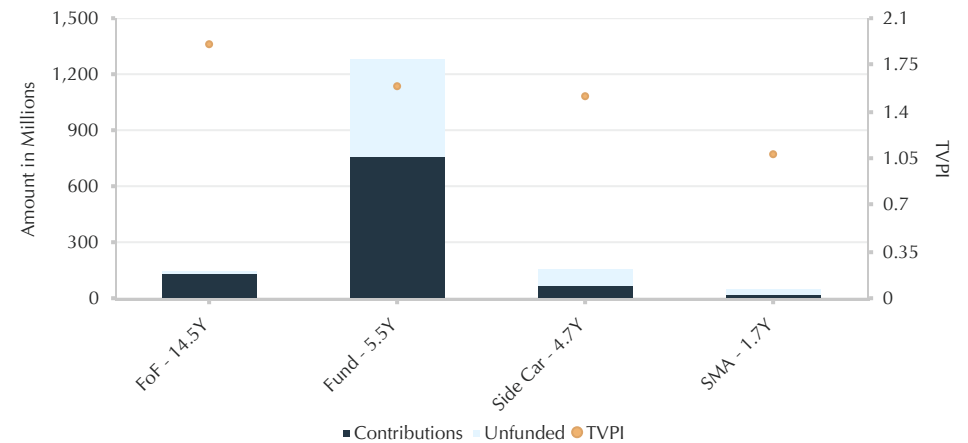
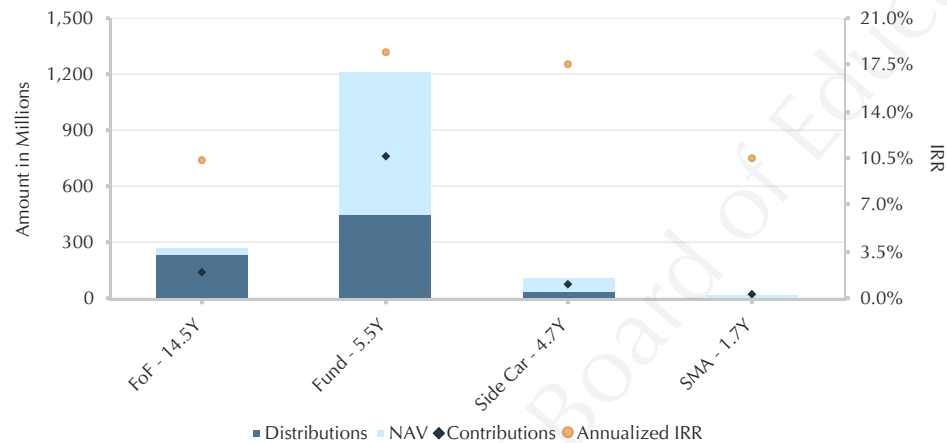


Performance Review

Performance Review by Strategy



Performance Review by Structure



Weighted Average Age (WAA) is based on contributions

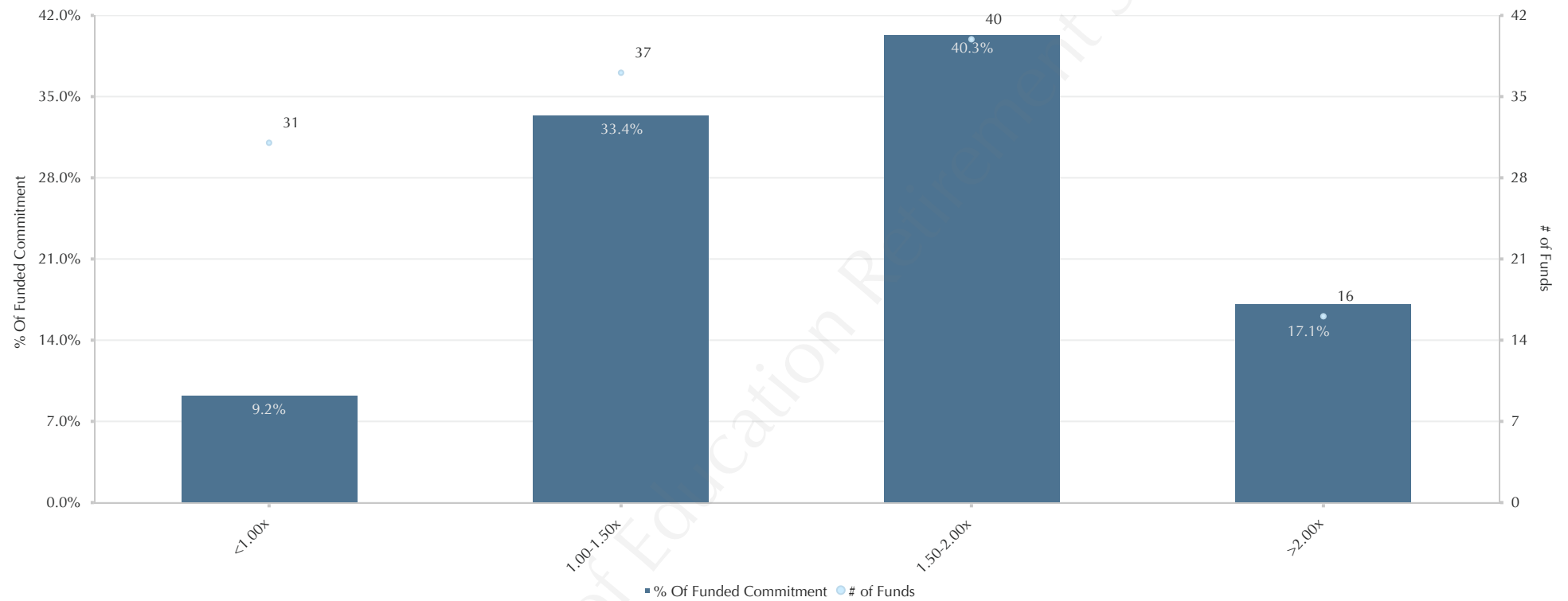
WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Performance Statistics

As Of Sep-2022	Sep-2021	Dec-2021	Mar-2022	Jun-2022	Sep-2022	% Change (YTD)	% Change (Quarter)	% Change (Annual)	Sep-2022 Active	Sep-2022 Liquidated
Committed Capital	1,234.5	1,308.2	1,408.1	1,539.2	1,570.1	20.0%	2.0%	27.2%	1,551.1	19.0
Unfunded Commitment	502.8	516.4	579.2	658.6	642.5	24.4%	-2.5%	27.8%	642.5	0.0
Net Contributed Capital	727.8	787.0	822.4	870.9	912.9	16.0%	4.8%	25.4%	893.9	19.0
Net Distributed Capital	505.7	567.0	589.2	611.6	639.7	12.8%	4.6%	26.5%	616.5	23.3
Recallable Capital	55.2	62.1	63.9	68.9	70.4	13.3%	2.2%	27.5%	70.4	0.0
Net Asset Value	824.4	884.5	898.8	891.6	889.6	0.6%	-0.2%	7.9%	889.6	0.0
Net Gain/Loss	598.5	662.0	663.0	628.9	612.7	-7.4%	-2.6%	2.4%	607.1	5.59
Total Value	1,330.1	1,451.5	1,487.9	1,503.2	1,529.3	5.4%	1.7%	15.0%	1,506.1	23.3
Unfunded + NAV (mm)	1,327.2	1,400.9	1,477.9	1,550.3	1,532.1	9.4%	-1.2%	15.4%	1,532.1	0.0
DPI	0.7x	0.7x	0.7x	0.7x	0.7x	0.0x	0.0x	0.0x	0.7x	1.3x
Total Value to Paid-In (TVPI)	1.8x	1.8x	1.7x	1.7x	1.6x	-0.2x	0.0x	-0.1x	1.6x	1.3x
Net Internal Rate of Return (IRR)	15.7%	16.1%	15.7%	14.9%	14.4%	-1.8%	-0.6%	-1.4%	14.9%	4.9%

TVPI Distribution

TVPI Distribution



Strategy	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Buyout	54.1%	813.0	457.0	245.0	391.6	873.3	269.7	481.7	18.5%	1.6x
Growth Equity	15.7%	180.8	130.1	71.3	54.0	193.7	80.9	139.7	16.6%	1.6x
Multi-Strategy	6.1%	194.0	157.3	230.6	36.5	91.1	128.0	54.6	10.3%	1.8x
Secondaries	11.1%	206.8	116.0	82.8	95.4	194.3	65.7	98.8	18.3%	1.6x
Special Situations	12.9%	175.6	126.7	80.4	65.0	179.7	68.4	114.7	21.1%	1.5x
NYCBERS - PE	100.0%	1,570.1	987.1	710.1	642.5	1,532.1	612.7	889.6	14.4%	1.6x

Vintage	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
2023	0.1%	47.5	0.0	0.0	47.5	48.2	0.67	0.67	n.m.	0.0x
2022	2.6%	233.9	23.5	0.00	208.6	231.4	-0.75	22.8	n.m. ¹	1.0x
2021	12.1%	302.2	110.1	4.80	190.9	298.3	2.03	107.4	n.m. ¹	1.0x
2020	9.3%	124.7	70.9	8.15	58.2	141.4	20.4	83.2	25.7%	1.3x
2019	6.2%	63.3	45.3	4.40	18.6	73.9	14.4	55.3	20.9%	1.3x
2018	19.2%	180.9	135.9	33.3	52.9	223.4	67.8	170.4	25.0%	1.5x
2017	14.0%	101.2	93.4	28.6	15.8	139.9	59.4	124.1	19.0%	1.6x
2016	8.8%	59.4	64.2	53.4	5.21	83.3	67.3	78.1	22.4%	2.0x
2015	7.6%	75.2	72.0	73.8	9.06	76.7	69.5	67.7	21.7%	2.0x
2014	10.8%	106.3	107.1	109.7	17.0	113.2	98.7	96.1	17.7%	1.9x
2013	3.9%	89.4	83.7	103.3	10.4	44.8	53.9	34.4	13.2%	1.6x
2012	1.0%	25.0	25.4	32.7	0.0	9.19	16.6	9.19	11.2%	1.7x
2011	0.4%	15.0	14.7	27.5	3.24	6.37	16.0	3.13	36.1%	2.1x
2008	3.1%	45.0	42.5	74.3	2.93	30.1	59.0	27.2	17.2%	2.4x
2006	0.5%	44.0	42.0	65.3	0.88	5.66	28.0	4.79	8.6%	1.7x
2005	0.6%	57.0	56.2	90.9	1.14	6.22	39.8	5.08	8.3%	1.7x
NYCBERS - PE	100.0%	1,570.1	987.1	710.1	642.5	1,532.1	612.7	889.6	14.4%	1.6x

	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Structure										
FoF	4.2%	146.0	140.8	230.5	4.94	42.0	126.8	37.1	10.3%	1.9x
Fund	85.6%	1,219.9	759.7	447.5	520.1	1,281.2	448.9	761.1	18.5%	1.6x
Side Car	8.3%	156.2	70.1	31.9	85.9	159.7	35.8	73.9	17.6%	1.5x
SMA	2.0%	48.0	16.5	0.14	31.5	49.1	1.23	17.5	n.m. ¹	1.1x
NYCBERS - PE	100.0%	1,570.1	987.1	710.1	642.5	1,532.1	612.7	889.6	14.4%	1.6x
Region										
Asia Pacific	0.8%	25.0	7.86	0.07	17.6	25.1	-0.36	7.43	n.m. ¹	1.0x
Europe	19.9%	271.1	176.1	97.7	100.2	277.2	98.5	177.0	19.1%	1.6x
Global	20.8%	378.0	188.7	114.8	192.0	377.3	111.4	185.3	17.2%	1.6x
North America	58.4%	896.0	614.4	497.6	332.6	852.5	403.1	519.9	13.5%	1.7x
NYCBERS - PE	100.0%	1,570.1	987.1	710.1	642.5	1,532.1	612.7	889.6	14.4%	1.6x

Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Buyout											
American Securities Partners VII	USD	1.3%	8.00	7.80	3.07	0.69	12.2	6.75	11.5	16.9%	1.9x
Apax IX	USD	1.7%	13.0	14.0	13.1	1.24	16.6	14.4	15.3	24.9%	2.0x
Apax X	USD	0.8%	12.5	7.06	0.79	6.22	13.6	1.14	7.42	n.m. ¹	1.2x
Apax XI	USD	-	25.0	0.0	0.0	25.0	25.0	0.0	0.0 ²	n.m.	0.0x
BC European Capital X	USD	1.4%	11.1	10.7	1.54	1.02	13.3	3.16	12.3	7.8%	1.3x
BCEC X Metro Co-Investment	USD	0.7%	4.43	4.61	1.19	0.00	6.49	3.07	6.49	14.2%	1.7x
Bridgepoint Europe V	USD	0.5%	8.86	8.14	11.2	0.61	5.22	7.62	4.61	18.8%	1.9x
Bridgepoint Europe V Co-Invest	USD	0.2%	2.95	2.67	5.51	0.21	1.71	4.34	1.49	27.1%	2.6x
Bridgepoint Europe VI	USD	1.5%	15.4	11.3	1.11	2.49	15.8	3.13	13.3	15.7%	1.3x
Bridgepoint Europe VI Co-Invest	USD	0.4%	3.85	2.70	0.0	0.76	4.66	1.19	3.90	19.0%	1.4x
Carlyle Partners VI	USD	1.2%	20.0	21.6	31.9	1.06	11.7	20.9	10.6	16.0%	2.0x
Carlyle Partners VI - Side Car	USD	0.2%	2.20	1.60	2.00	0.03	1.45	1.82	1.43	13.8%	2.1x
Crestview IV Co-Invest	USD	0.2%	2.67	1.24	0.36	1.79	3.49	0.82	1.70	n.m. ¹	1.7x
Crestview Partners III	USD	1.7%	15.0	13.5	6.81	4.29	19.2	8.22	14.9	14.0%	1.6x
Crestview Partners III (Co-Investment B)	USD	0.7%	5.00	5.18	0.25	0.0	6.51	1.58	6.51	5.3%	1.3x
Crestview Partners IV	USD	0.5%	8.00	3.73	0.93	5.20	9.77	1.77	4.56	n.m. ¹	1.5x
CVC Capital Partners VI	USD	2.1%	20.0	19.7	18.9	1.49	19.7	17.4	18.2	16.5%	1.9x
CVC Capital Partners VII	USD	2.7%	19.1	17.3	2.51	2.65	26.7	9.26	24.1	20.7%	1.5x
CVC Capital Partners VIII	USD	0.9%	25.5	8.17	0.0	15.2	23.6	0.24	8.41	n.m. ¹	1.0x
EQT IX	USD	2.0%	19.6	17.3	1.79	4.04	21.7	2.09	17.6	n.m. ¹	1.1x
EQT IX (Co-Invest)	USD	0.6%	5.36	5.32	0.09	0.11	5.62	0.28	5.51	n.m. ¹	1.1x
EQT VII	USD	1.1%	17.7	19.7	27.2	1.41	11.2	17.3	9.83	22.5%	1.9x

Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
EQT VIII	USD	1.5%	14.1	12.6	7.74	1.69	15.4	8.82	13.7	27.6%	1.7x
EQT VIII (Co-Invest)	USD	0.6%	4.91	4.68	3.45	0.0	5.58	4.35	5.58	39.5%	1.9x
EQT X	USD	0.0%	18.8	0.0	0.0	18.8	18.6	-0.15	-0.15	n.m.	0.0x
EQT X (Co-Invest)	USD	-	6.25	0.0	0.0	6.25	6.25	0.0	0.0 ²	n.m.	0.0x
Grain Communications Opportunity Fund II	USD	1.2%	11.9	6.96	0.02	4.99	15.4	3.47	10.4	20.8%	1.5x
Grain Communications Opportunity Fund III	USD	0.2%	3.00	1.68	0.00	1.33	2.78	-0.22	1.46	n.m. ¹	0.9x
Green Equity Investors IX	USD	-	19.9	0.0	0.0	19.9	19.9	0.0	0.0 ²	n.m.	0.0x
Green Equity Investors IX Co-Invest	USD	-	6.63	0.0	0.0	6.63	6.63	0.0	0.0 ²	n.m.	0.0x
Green Equity Investors VII	USD	1.7%	10.0	9.56	5.79	2.47	17.2	11.0	14.8	25.1%	2.2x
Heartwood Partners III	USD	0.2%	2.75	2.00	0.99	0.75	2.84	1.08	2.09	19.4%	1.5x
Hg Genesis 10	USD	0.0%	11.4	0.04	0.0	10.7	10.7	-0.01	0.03	n.m. ¹	0.8x
Hg NYC Co-Invest	USD	0.2%	4.17	1.37	0.0	2.81	4.17	0.00	1.36	n.m. ¹	1.0x
Hg Saturn 3	USD	0.0%	8.33	0.04	0.0	8.29	8.27	-0.06	-0.02	n.m.	-0.5x
ICV Partners IV	USD	0.2%	3.00	2.05	1.21	1.09	2.99	1.05	1.89	25.0%	1.5x
Insight Partners XII Buyout Annex Fund	USD	0.4%	6.25	3.44	0.0	2.81	6.01	-0.24	3.20	n.m. ¹	0.9x
KKR Americas Fund XII	USD	2.3%	16.0	15.4	5.86	1.87	22.5	11.1	20.7	23.1%	1.7x
KKR Americas Fund XIII	USD	0.6%	31.0	6.87	0.0	24.1	29.8	-1.18	5.69	n.m. ¹	0.8x
KKR Asian Fund IV	USD	0.8%	25.0	7.86	0.07	17.6	25.1	-0.36	7.43	n.m. ¹	1.0x
KKR European Fund V (USD)	USD	0.9%	9.95	8.61	1.67	1.66	9.60	1.01	7.95	7.9%	1.1x
Lindsay Goldberg V	USD	0.6%	10.5	4.75	1.43	5.90	10.9	1.70	5.02	32.5%	1.4x
Mill City Fund II	USD	0.1%	1.20	1.36	0.67	0.03	1.05	0.32	1.02	4.0%	1.2x
NMS Fund II	USD	0.1%	1.20	1.26	1.20	0.16	0.81	0.59	0.64	10.3%	1.5x
NMS Fund III	USD	0.3%	2.00	1.63	0.43	0.66	3.18	1.32	2.52	26.8%	1.8x
Nordic Capital XI	USD	-	14.1	0.0	0.0	13.1	13.1	0.0	0.0 ²	n.m.	0.0x

Reporting Period: As Of Sep-2022

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Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Nordic N11 Co-Investment	USD	-	5.91	0.0	0.0	5.78	5.78	0.0	0.0 ²	n.m.	0.0x
One Rock Capital Partners III	USD	1.9%	25.0	16.7	2.56	10.8	27.5	2.50	16.6	n.m. ¹	1.1x
Palladium Equity Partners V	USD	0.7%	10.0	6.28	1.09	4.20	10.7	1.30	6.50	8.2%	1.2x
Patriot Financial Partners II	USD	0.2%	3.50	3.68	4.55	0.12	1.59	2.34	1.47	12.9%	1.6x
Patriot Financial Partners III	USD	0.3%	2.50	2.30	0.13	0.19	2.99	0.63	2.81	8.2%	1.3x
Permira VIII	USD	0.0%	23.7	0.0	0.0	20.6	20.6	0.00	0.00	n.m.	0.0x
Reverence Capital Partners Opportunities Fund II	USD	0.4%	3.00	2.42	0.28	0.68	4.63	1.80	3.95	31.2%	1.7x
Reverence Capital Partners Opportunities Fund II (Parallel)	USD	0.3%	1.50	1.17	0.14	0.37	2.68	1.28	2.31	43.5%	2.1x
Reverence Capital Partners Opportunities Fund V (FOO) (PE Fund III)	USD	0.2%	7.00	1.59	0.00	5.41	6.99	-0.01	1.58	n.m. ¹	1.0x
Reverence Capital Partners Opportunities Fund V (PE Fund III)	USD	0.5%	18.0	4.34	0.00	13.7	17.8	-0.21	4.13	n.m. ¹	1.0x
Siris Partners III	USD	0.3%	3.50	3.61	2.71	0.52	3.41	1.98	2.88	13.5%	1.5x
Siris Partners IV	USD	1.3%	10.0	8.10	1.18	2.55	13.9	4.48	11.4	21.8%	1.6x
Thoma Bravo XV	USD	0.7%	20.3	6.19	0.00	14.1	20.2	-0.08	6.12	n.m. ¹	1.0x
Thoma Bravo XV Co-Invest	USD	0.3%	6.75	2.73	0.0	4.02	6.73	-0.02	2.71	n.m. ¹	1.0x
TPG Rise Climate	USD	0.1%	8.33	1.15	0.0	7.18	8.20	-0.13	1.02	n.m. ¹	0.9x
TPG Rise Climate Co-Invest	USD	0.3%	16.7	2.74	0.0	13.9	16.8	0.15	2.89	n.m. ¹	1.1x
Vista Equity Partners Fund V	USD	3.6%	25.0	31.1	36.6	5.19	37.2	37.5	32.0	20.1%	2.2x
Vista Equity Partners Fund VI	USD	2.5%	16.0	19.9	16.4	1.82	24.2	18.9	22.4	19.5%	2.0x
Vista Equity Partners Fund VII	USD	2.5%	20.5	16.5	0.19	4.18	26.1	5.65	22.0	15.0%	1.3x
Vistria Fund III	USD	0.4%	3.00	2.65	0.0	0.35	4.00	1.00	3.65	23.0%	1.4x
Vistria Fund IV	USD	0.9%	13.0	7.99	0.18	5.19	13.2	0.23	8.04	n.m. ¹	1.0x
WCAS XIII	USD	1.2%	10.0	8.45	0.94	1.44	11.8	2.83	10.3	29.5%	1.3x

Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Webster Capital III	USD	0.0%	2.25	2.45	6.00	0.01	0.26	3.79	0.25	22.3%	2.5x
Welsh, Carson, Anderson & Stowe XII	USD	1.3%	10.0	9.37	11.4	0.27	12.3	14.1	12.0	28.5%	2.5x
Welsh, Carson, Anderson & Stowe XIV	USD	0.0%	30.0	0.0	0.0	30.0	29.7	-0.33	-0.33 ³	n.m.	0.0x
Welsh, Carson, Anderson & Stowe XIV N Co-Invest	USD	-	10.0	0.0	0.0	10.0	10.0	0.0	0.0 ²	n.m.	0.0x
Total Buyout	USD	54.1%	813.0	457.0	245.0	391.6	873.3	269.7	481.7	18.5%	1.6x
Growth Equity											
FTV V	USD	0.8%	3.50	3.92	3.42	0.0	7.42	6.93	7.42	35.3%	2.8x
FTV VI	USD	0.6%	3.50	3.29	0.0	0.21	5.72	2.22	5.51	38.9%	1.7x
FTV VII	USD	0.7%	23.8	6.43	0.0	17.4	23.6	-0.26	6.17	n.m. ¹	1.0x
FTV VII Co-Invest	USD	0.2%	5.36	1.55	0.0	3.81	5.36	0.0	1.55	n.m. ¹	1.0x
Insight Partners XII	USD	1.0%	18.8	11.1	0.02	7.69	16.8	-1.93	9.12	n.m. ¹	0.8x
PSG V	USD	0.8%	23.0	8.00	0.71	15.7	22.9	-0.08	7.21	n.m. ¹	1.0x
Raine Partners II	USD	0.4%	3.00	3.00	5.59	0.35	4.26	6.50	3.91	28.7%	3.2x
Raine Partners III	USD	1.1%	8.50	9.00	0.50	0.0	9.87	1.38	9.87	9.2%	1.2x
Raine Partners IV	USD	-	5.33	0.0	0.0	5.33	5.33	0.0	0.0 ²	n.m.	0.0x
Valor Equity Partners III	USD	0.3%	3.50	3.53	4.85	0.02	2.68	3.98	2.66	14.7%	2.1x
Valor Equity Partners IV	USD	1.1%	4.50	4.30	0.37	0.22	10.2	6.06	9.99	26.0%	2.4x
Valor Equity Partners V	USD	0.4%	3.50	2.87	0.0	0.63	4.54	1.04	3.91	n.m. ¹	1.4x
Warburg Pincus Financial Sector	USD	2.1%	13.0	13.1	5.00	0.51	19.0	10.4	18.5	24.5%	1.8x
Warburg Pincus Global Growth	USD	2.0%	15.0	13.1	0.11	1.81	19.3	4.49	17.5	17.4%	1.3x
Warburg Pincus Private Equity XI	USD	1.0%	25.0	25.4	32.7	0.0	9.19	16.6	9.19	11.2%	1.7x
Warburg Pincus Private Equity XII	USD	3.1%	21.5	21.5	18.0	0.29	27.4	23.6	27.1	20.3%	2.1x
Total Growth Equity	USD	15.7%	180.8	130.1	71.3	54.0	193.7	80.9	139.7	16.6%	1.6x

Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Multi-Strategy											
HarbourVest Centre Street Co-Investment Fund	USD	1.1%	23.0	10.0	0.0	13.0	22.7	-0.33	9.69	n.m. ¹	1.0x
Mesirow Financial Private Equity Partnership Fund III	USD	0.6%	57.0	56.2	90.9	1.14	6.22	39.8	5.08	8.3%	1.7x
Mesirow Financial Private Equity Partnership Fund IV	USD	0.5%	25.0	24.3	42.0	0.88	5.66	22.4	4.79	11.0%	1.9x
Mesirow Financial Private Equity Partnership Fund V	USD	3.1%	45.0	42.5	74.3	2.93	30.1	59.0	27.2	17.2%	2.4x
NYC-Northbound Emerging Managers Program	USD	0.9%	25.0	6.43	0.14	18.6	26.4	1.56	7.85	n.m. ¹	1.2x
Liquidated Holdings (1)	USD	-	19.0	17.7	23.3	0.0	0.0	5.59		4.9%	1.3x
Total Multi-Strategy	USD	6.1%	194.0	157.3	230.6	36.5	91.1	128.0	54.6	10.3%	1.8x

Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Secondaries											
ASF VI B	USD	0.2%	15.0	12.3	16.0	2.17	4.37	5.82	2.20	12.4%	1.5x
ASF VI B NYC Co-Invest	USD	0.1%	5.00	4.27	5.23	0.73	1.93	2.15	1.20	12.5%	1.5x
ASF VII B	USD	0.7%	10.0	6.45	4.67	3.41	9.40	4.22	6.00	18.0%	1.7x
ASF VII B NYC Co-Invest	USD	0.4%	6.00	4.17	3.86	1.83	5.25	3.12	3.42	19.7%	1.7x
ASF VIII B	USD	1.5%	21.0	10.0	1.85	11.0	24.4	5.28	13.5	31.6%	1.5x
ASF VIII B NYC Co-Invest	USD	0.7%	10.5	4.17	0.76	6.33	12.2	2.49	5.90	55.0%	1.6x
ICG Strategic Equity Co-Investment Fund III	USD	0.4%	4.44	3.28	1.80	1.16	4.86	2.22	3.70 ²	n.m. ¹	1.7x
ICG Strategic Equity Co-Investment Fund IV	USD	0.7%	10.0	5.55	0.0	4.45	10.4	0.41	5.96 ²	n.m. ¹	1.1x
ICG Strategic Equity Fund III	USD	1.6%	13.3	9.59	3.20	4.63	19.2	8.20	14.6 ²	48.6%	1.9x
ICG Strategic Equity Fund IV	USD	0.7%	20.0	5.95	1.31	14.7	21.3	1.97	6.61 ²	n.m. ¹	1.3x
Landmark - NYC Fund I	USD	0.4%	6.00	5.50	6.38	0.50	3.75	4.13	3.25	16.0%	1.8x
Landmark Equity Partners XV	USD	0.5%	19.0	15.3	17.6	3.75	7.86	6.49	4.12	12.3%	1.4x
Lexington Capital Partners IX	USD	1.2%	12.4	8.35	2.27	5.00	16.0	4.90	11.0	44.6%	1.6x
Lexington Capital Partners VIII	USD	1.5%	20.0	18.2	17.2	4.36	17.4	12.1	13.1	17.6%	1.7x
Lexington Capital Partners X	USD	0.1%	22.5	0.0	0.0	22.5	23.2	0.67	0.67	n.m.	0.0x
Lexington Capital Partners X Co-Invest	USD	0.1%	7.50	0.88	0.0	6.62	7.69	0.19	1.07	n.m. ¹	1.2x
Lexington IX Co-Invest	USD	0.3%	4.13	2.02	0.70	2.33	4.96	1.31	2.63	48.2%	1.6x
Total Secondaries	USD	11.1%	206.8	116.0	82.8	95.4	194.3	65.7	98.8	18.3%	1.6x

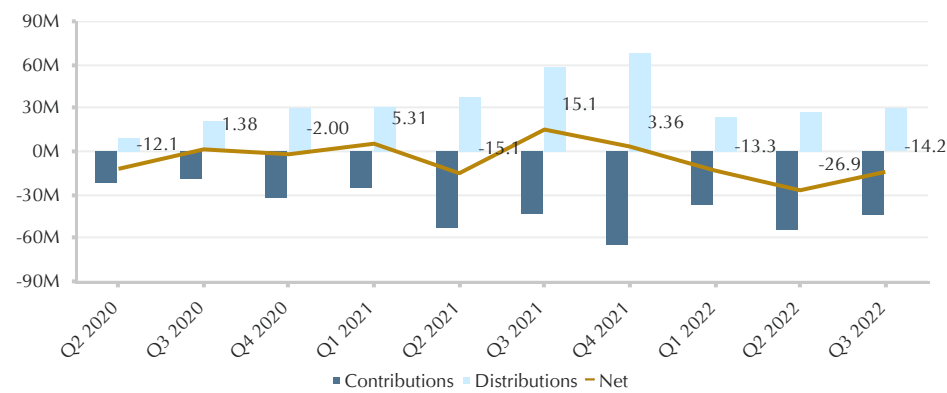
Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Special Situations											
Apollo Investment Fund IX	USD	3.0%	32.0	26.0	8.53	11.5	38.6	9.62	27.1	24.9%	1.4x
Apollo Investment Fund VIII	USD	0.9%	20.0	19.2	20.1	2.58	11.0	9.36	8.39	10.2%	1.5x
Ares Corporate Opportunities Fund V	USD	1.1%	10.0	10.8	4.72	0.94	11.1	4.04	10.1	11.3%	1.4x
Centerbridge Capital Partners III	USD	0.3%	2.50	3.26	2.85	0.23	2.93	2.29	2.69	19.8%	1.7x
Clearlake Capital Partners VI	USD	1.6%	10.0	10.1	0.84	0.28	14.3	4.78	14.1	34.3%	1.5x
Clearlake Capital Partners VII	USD	1.1%	30.0	10.3	0.00	19.7	29.8	-0.17	10.2	n.m. ¹	1.0x
LightBay Investment Partners II	USD	0.0%	4.50	0.40	0.0	4.10	4.46	-0.04	0.37	n.m. ¹	0.9x
Platinum Equity Capital Partners III	USD	0.4%	15.0	14.7	27.5	3.24	6.37	16.0	3.13	36.1%	2.1x
Platinum Equity Capital Partners IV	USD	1.5%	11.5	11.4	10.8	1.25	14.8	12.9	13.5	27.7%	2.1x
Platinum Equity Capital Partners IV Co-Investment	USD	0.2%	1.05	1.05	0.21	0.0	1.75	0.91	1.75	18.1%	1.9x
Platinum Equity Small Cap Fund	USD	1.1%	10.0	7.29	1.76	3.52	13.7	4.70	10.2	27.8%	1.6x
Stellex Capital Partners	USD	0.4%	4.00	3.86	3.07	1.09	4.80	2.93	3.72	23.5%	1.8x
Stellex Capital Partners II	USD	1.1%	25.0	8.43	0.00	16.6	26.0	1.04	9.47	n.m. ¹	1.1x
Total Special Situations	USD	12.9%	175.6	126.7	80.4	65.0	179.7	68.4	114.7	21.1%	1.5x
NYCBERS - PE	USD	100.0%	1,570.1	987.1	710.1	642.5	1,532.1	612.7	889.6	14.4%	1.6x

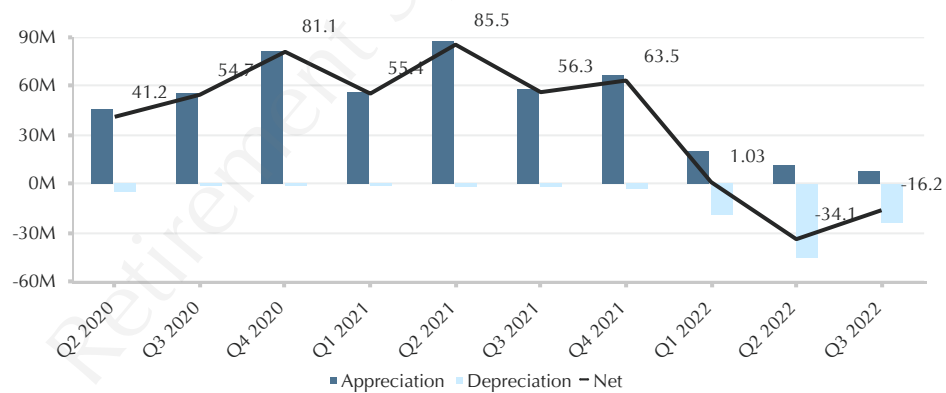
¹ IRR not meaningful for investments held less than 24 months² Adjusted for additional contributions and distributions since last valuation, which is prior to the report date.³ NAV is not up-to-date: ICG Strategic Equity Co-Investment Fund III, ICG Strategic Equity Co-Investment Fund IV, ICG Strategic Equity Fund III, ICG Strategic Equity Fund IV, and Welsh, Carson, Anderson & Stowe XIV as of Jun-2022

* Total figures take into account all current and closed portfolio positions as at Sep-2022

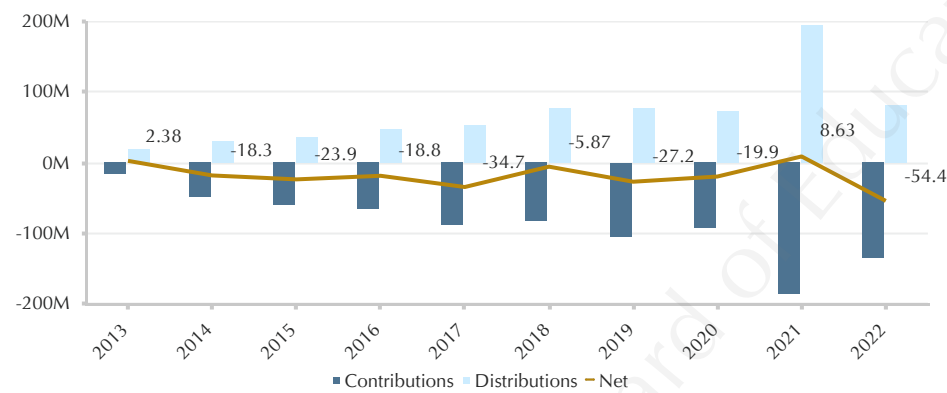
Cash Flows Quarterly



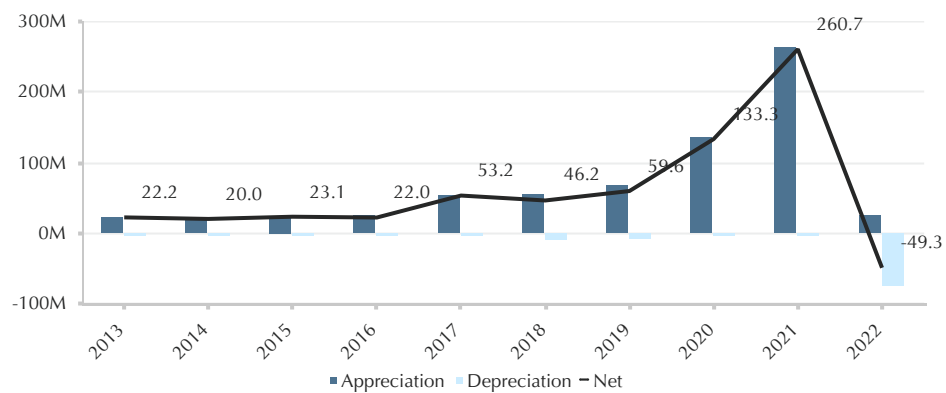
Appreciation/Depreciation Quarterly



Cash Flows Yearly



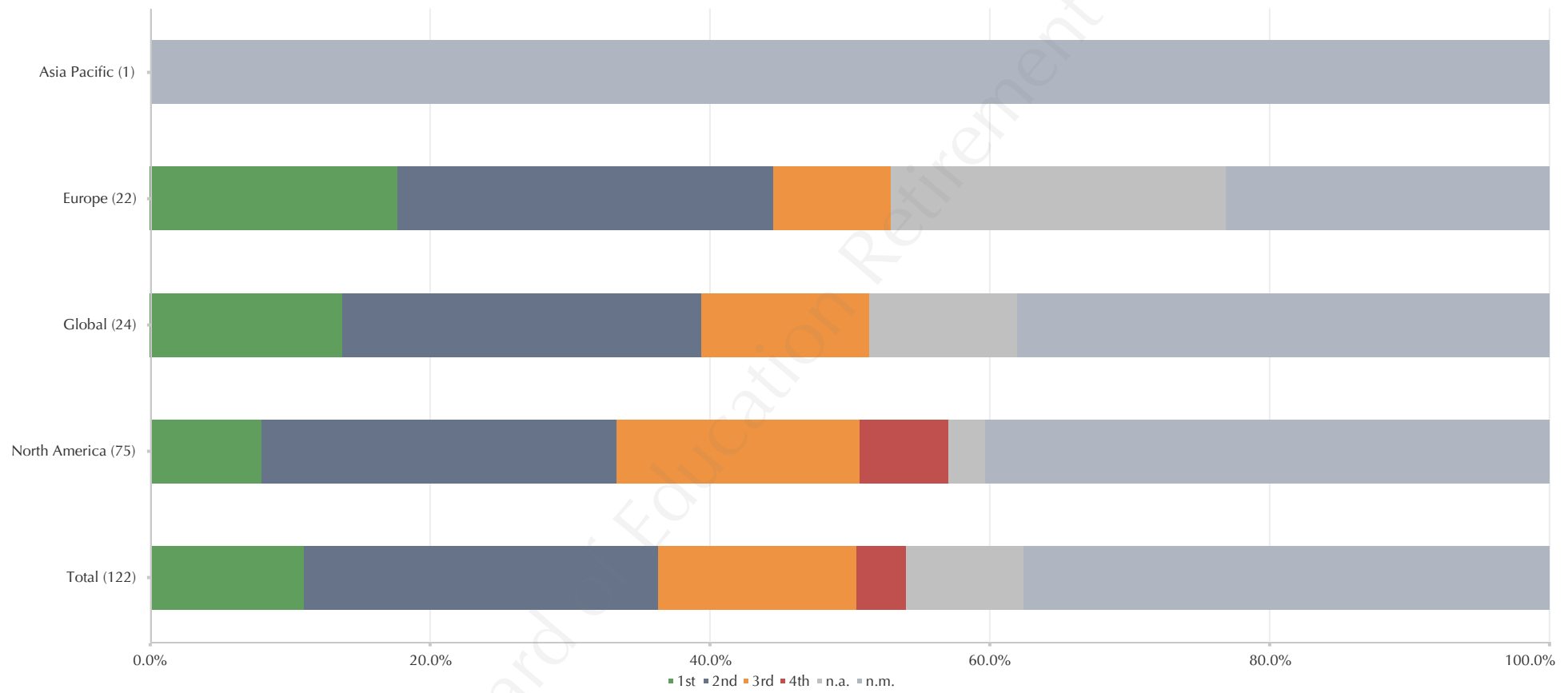
Appreciation/Depreciation Yearly



Portfolio IRR vs Benchmark PME+

PERFORMANCE VERSUS BENCHMARKS						
9/30/2022	1 QTR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	INCEPTION
Program IRR	-1.8%	1.7%	21.0%	18.5%	17.1%	14.4%
Russell 3000 PME+	-4.7%	-19.2%	5.0%	7.1%	9.8%	9.2%
Difference	2.9%	20.9%	16.0%	11.4%	7.3%	5.1%
Russell 3000 +300bps PME+	-4.0%	-16.6%	8.9%	10.8%	13.6%	12.8%
Difference	2.2%	18.3%	12.1%	7.7%	3.5%	1.5%
6/30/2022	1 QTR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	INCEPTION
Program IRR	-3.7%	11.1%	22.6%	20.0%	17.7%	14.9%
Cambridge Associates	-5.7%	3.9%	23.1%	20.9%	17.7%	13.6%
Difference	1.9%	7.2%	-0.5%	-0.9%	0.0%	1.3%

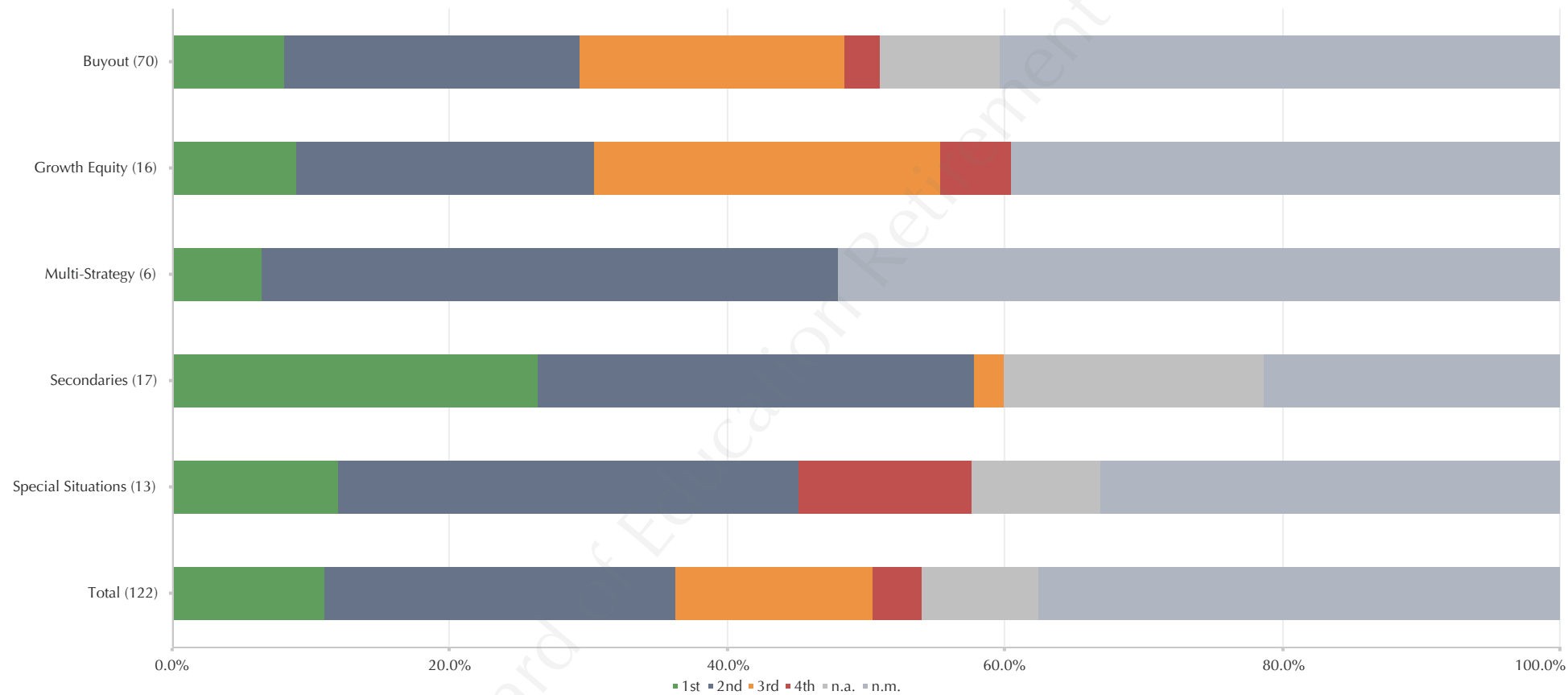
By Region



n.m. : IRR is not meaningful
n.a. :Not available Benchmark data

CA benchmark data is not available for Q3 2022, data is presented as of Q2 2022

By Strategy



n.m. : IRR is not meaningful
n.a. :Not available Benchmark data

CA benchmark data is not available for Q3 2022, data is presented as of Q2 2022

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Real Estate Quarterly Report (Public):

NYCBERS - RE

Public Report

As Of September 2022

Intended Recipient: **NYC Board of Education Retirement System**

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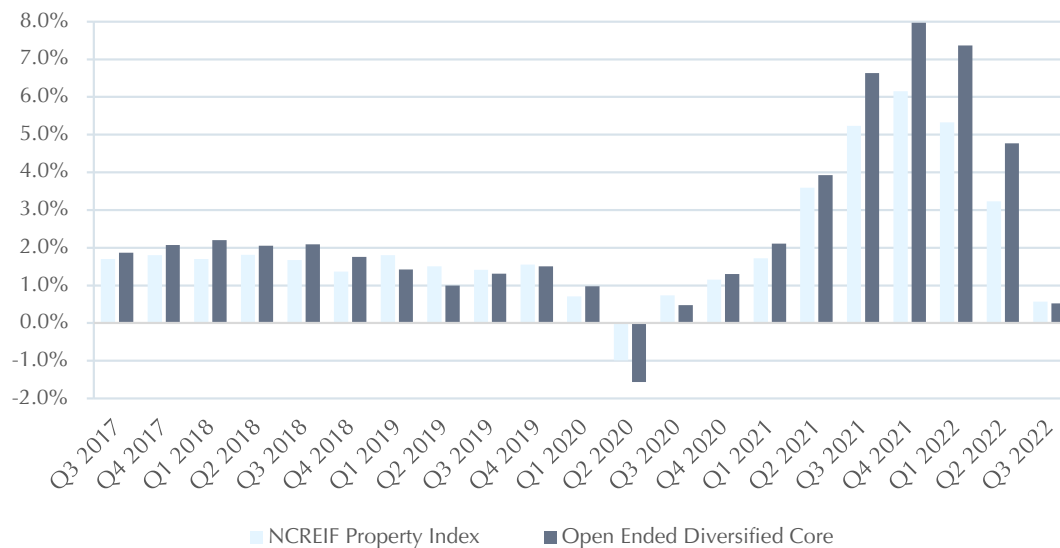
**Board of Education
Retirement System**

Aksia 

Real Estate Overview

Tailwinds	Headwinds
<ul style="list-style-type: none"> The industrial sector fundamentals remain strong, stemming from a secular trend toward more e-commerce, supply chain reconfiguration and “near-shoring” impacts, which have been accelerated by the pandemic. Overall performance of market-rate multifamily assets remains strong in most markets, with high rental rate trade-outs. Though concerns are emerging about how much higher rental rate increases consumers can absorb evidenced by recent upticks in vacancy rates and slower rental rate growth. Hotel occupancy and RevPAR for leisure assets has recovered meaningfully as leisure travel is normalizing post COVID-related travel restrictions. Though hospitality’s correlation to economic conditions are cause for concern going into 2023. 	<ul style="list-style-type: none"> Labor shortages are affecting a wide variety of real estate industries, with the highest impact on retail, hospitality and construction. Global supply chain issues have also driven up the cost of material inputs, resulting in rising construction costs and delayed project timelines. Increases in interest rates in 2022 have resulted in higher cost of debt for many real estate owners. This will likely lead to higher yield-requirements (cap rates) for investors during 4Q2022 and into 2023. Heightened interest rates and broader recessionary concerns are leading to re-trades and wider bid-ask spreads in property markets, which is resulting in reduced transaction volumes. Office leasing continues to be focused primarily on “trophy” properties as the flight to quality trend persists amongst tenants. Recent pullbacks in expansion plans / increase in sublease activity from large tech companies are cause for concern.

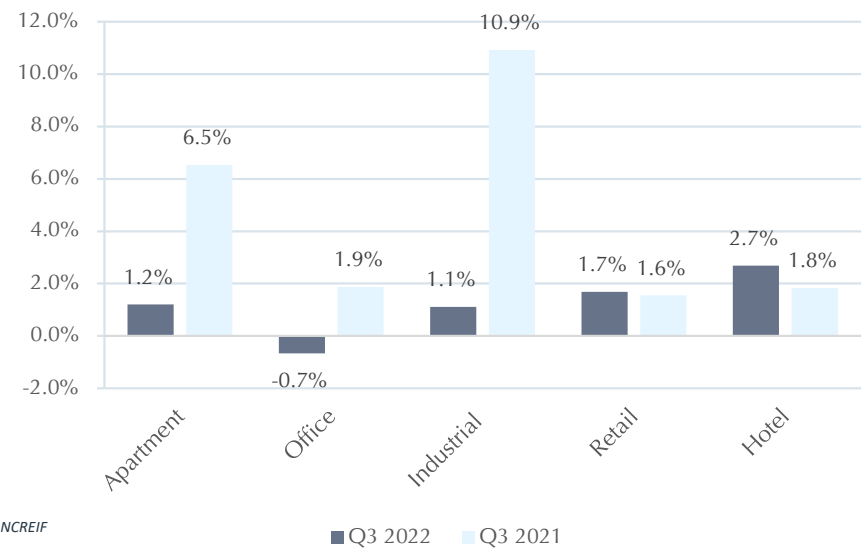
Figure 1: Gross Quarterly Returns | %



Performance at a Glance

- The NCREIF Open End Diversified Core (“ODCE”) and NCREIF Property Index (“NPI”) reported Q3 2022 gross returns of 0.52% and 0.57%, respectively.^{1,2}
- Transaction volumes declined during Q3 2022. The NPI reported 100 property transactions during the quarter, a 56% decline from Q3 2021 (228). Transactions during the quarter were spread fairly evenly across the apartment (33), industrial (26) and retail (30) sectors, with office (11) again lagging.²
- Most property sectors produced positive returns during the quarter according to NPI, with returns for the apartments and industrial sectors down meaningfully year-over-year. Office was the only sector that reported a negative return during the quarter.²
- The ODCE index reported negative appreciation during Q3 2022 (-0.29%), which was offset by a consistently-positive income return of 0.81%. Even with a decline in Q3, the overall appreciation return for the trailing 1-year is +17.98%.¹

Figure 2: Property Index Returns by Component | %



Source: NCREIF

Reporting Period: As Of Sep-2022

[View this portfolio online](#)

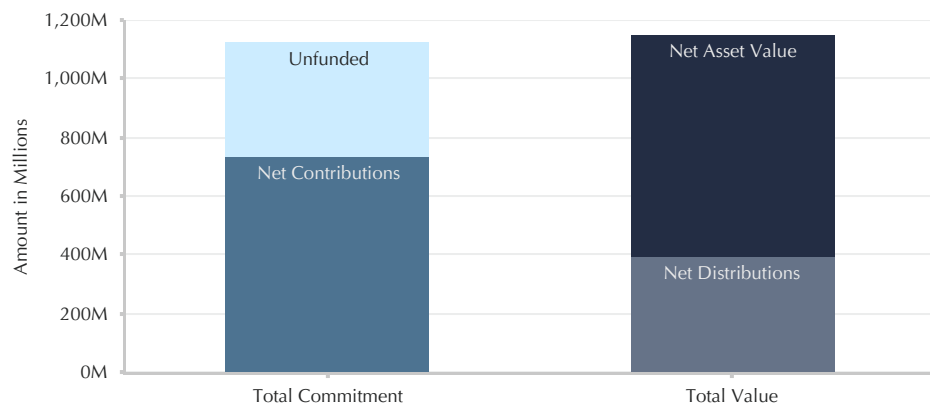
SOURCES:

¹ NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES ("NCREIF") OPEN-ENDED DIVERSIFIED CORE EQUITY INDEX ("ODCE").
WWW.NCREIF.ORG

² NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES ("NCREIF") PROPERTY INDEX ("NPI"). WWW.NCREIF.ORG



Summary



Portfolio Summary

Total Pension Assets	\$7.6 bn as of 09/30/2022
GP Relationships	33
Holdings	62
# of New Investments within the quarter*	1
# of Underlying Active Investments	2214
% of Public Companies	0.5%
Total Commitment Amount	\$1.1 bn
Net Contributions	\$733.1 mm
Net Distributions	\$394.8 mm
Net Asset Value	\$754.1 mm
Weighted Average Age	5.8Y
Unfunded Commitment	\$391.6 mm
Minimum Annual Pacing	200.0 mm
Maximum Annual Pacing	200.0 mm
Portfolio Allocation	9.9%
Minimum Target Allocation	6.0%
Maximum Target Allocation	10.0%

1Y IRR	17.3%	2Y IRR	19.9%	3Y IRR	13.5%
5Y IRR	11.6%	7Y IRR	11.5%	10Y IRR	11.9%
ITD IRR**	11.8%	ITD TVPI**	1.4x		

** Sep-2010 - Sep-2022

PERFORMANCE VERSUS BENCHMARKS					
9/30/2022	1 QUARTER	1 YEAR	3 YEAR	5 YEAR	INCEPTION
Total Real Estate TWRR	0.5%	22.2%	14.9%	12.1%	12.5%
NFI-ODCE +100 bps	0.6%	22.0%	12.4%	10.3%	11.5%
<i>Difference</i>	0.0%	0.2%	2.5%	1.9%	1.0%
Core / Core-Plus Real Estate TWRR	0.8%	16.9%	13.0%	10.1%	10.9%
NFI-ODCE	0.3%	21.0%	11.4%	9.3%	10.5%
<i>Difference</i>	0.5%	-4.1%	1.6%	0.8%	0.3%
Non-Core Real Estate TWRR	0.1%	30.5%	17.6%	15.0%	11.0%
NFI-ODCE +200 bps	0.8%	23.0%	13.4%	11.3%	12.5%
<i>Difference</i>	-0.7%	7.5%	4.2%	3.8%	-1.5%

IRR not meaningful for investments held less than 24 months
 Weighted Average Age (WAA) is based on contributions

Reporting Period: As Of Sep-2022

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Performance Statistics

As Of Sep-2022	Sep-2021	Dec-2021	Mar-2022	Jun-2022	Sep-2022	% Change (YTD)	% Change (Quarter)	% Change (Annual)	Sep-2022 Active	Sep-2022 Liquidated
Committed Capital	852.0	961.0	995.3	1,090.3	1,130.3	17.6%	3.7%	32.7%	1,130.3	-
Unfunded Commitment	307.0	376.3	384.9	456.7	391.6	4.1%	-14.2%	27.6%	391.6	-
Net Contributed Capital	545.0	584.5	609.9	630.8	733.1	25.4%	16.2%	34.5%	733.1	-
Net Distributed Capital	306.6	347.8	364.6	383.8	394.8	13.5%	2.9%	28.8%	394.8	-
Recallable Capital	41.8	44.5	45.9	49.3	52.5	17.9%	6.6%	25.8%	52.5	-
Net Asset Value	545.1	591.3	639.5	655.7	754.1	27.5%	15.0%	38.3%	754.1	-
Net Gain/Loss	261.4	307.4	344.3	356.3	360.4	17.2%	1.1%	37.9%	360.4	-
Total Value	851.7	939.0	1,004.1	1,039.4	1,148.9	22.4%	10.5%	34.9%	1,148.9	-
Unfunded + NAV (mm)	852.1	967.6	1,024.4	1,112.3	1,145.7	18.4%	3.0%	34.5%	1,145.7	-
DPI	0.6x	0.6x	0.6x	0.6x	0.5x	0.0x	-0.1x	0.0x	0.5x	-
Total Value to Paid-In (TVPI)	1.4x	1.5x	1.5x	1.5x	1.4x	0.0x	-0.1x	0.0x	1.4x	-
Net Internal Rate of Return (IRR)	11.0%	11.9%	12.3%	12.2%	11.8%	0.0%	-0.4%	0.8%	11.8%	-

Region	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Asia Pacific	0.5%	10.0	8.0	5.3	5.8	9.4	0.8	3.5	12.6%	1.1x
Europe	6.5%	119.4	75.2	60.4	48.6	97.5	34.2	48.9	13.3%	1.5x
Global	11.6%	257.0	163.6	129.2	112.4	199.9	53.2	87.6	16.1%	1.3x
North America	81.4%	743.9	594.4	252.4	224.8	838.9	272.2	614.1	11.1%	1.5x
NYCBERS - RE	100.0%	1,130.3	841.1	447.4	391.6	1,145.7	360.4	754.1	11.8%	1.4x

Strategy

Core / Core-plus	66.7%	446.4	439.9	153.5	54.9	558.0	216.7	503.1	10.9%	1.5x
Non-Core	33.3%	683.9	401.2	293.8	336.7	587.7	143.7	251.1	13.7%	1.4x
NYCBERS - RE	100.0%	1,130.3	841.1	447.4	391.6	1,145.7	360.4	754.1	11.8%	1.4x

Note: The portfolio allocation is based on the fund's strategy. Current portfolio exposure is generally in line with targets, and Aksia is continually working with Staff to strategically add new investments.

¹ IRR not meaningful for investments held less than 24 months

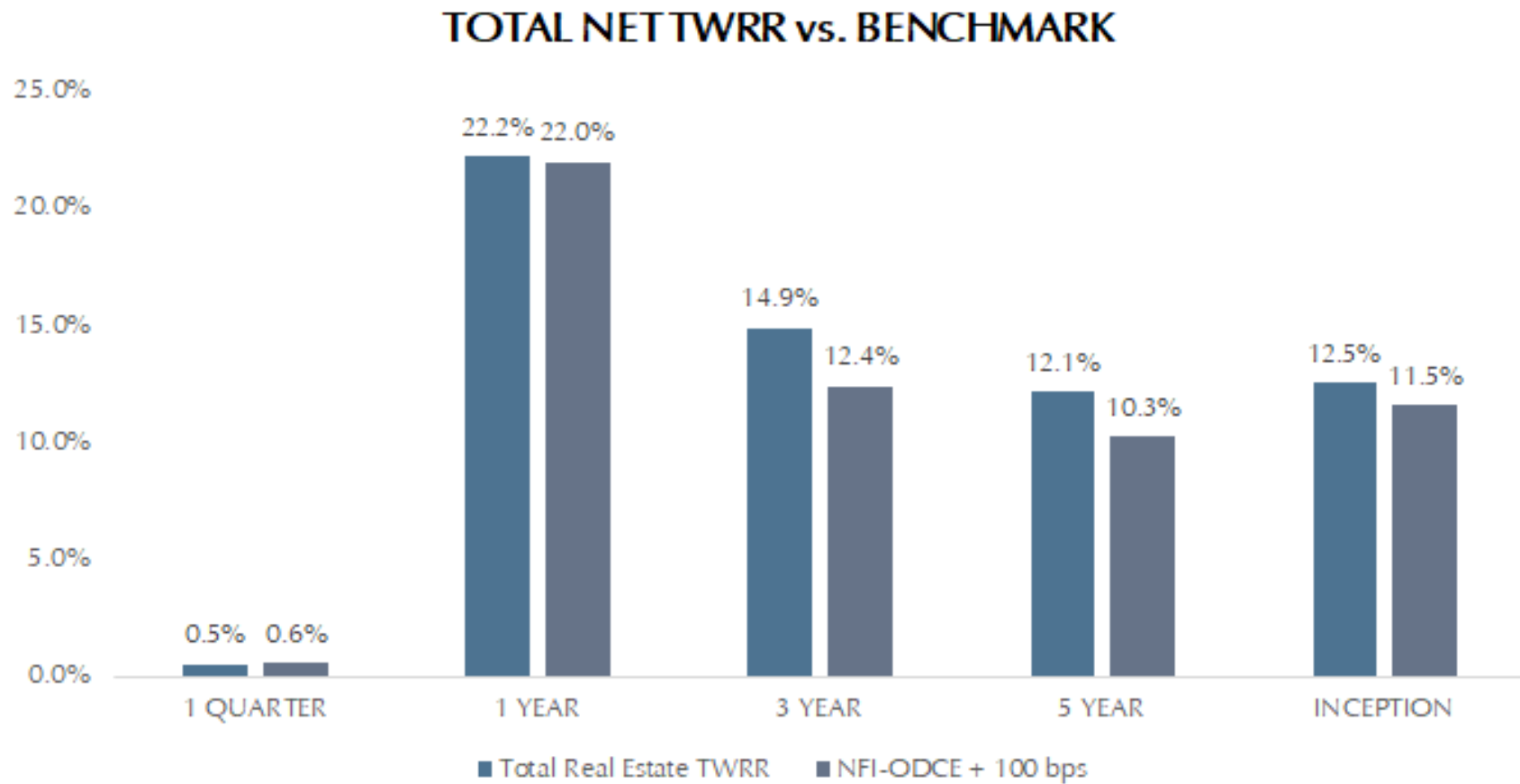
* Total figures take into account all current and closed portfolio positions Sep-2022

Reporting Period: Sep-2010 - Sep-2022

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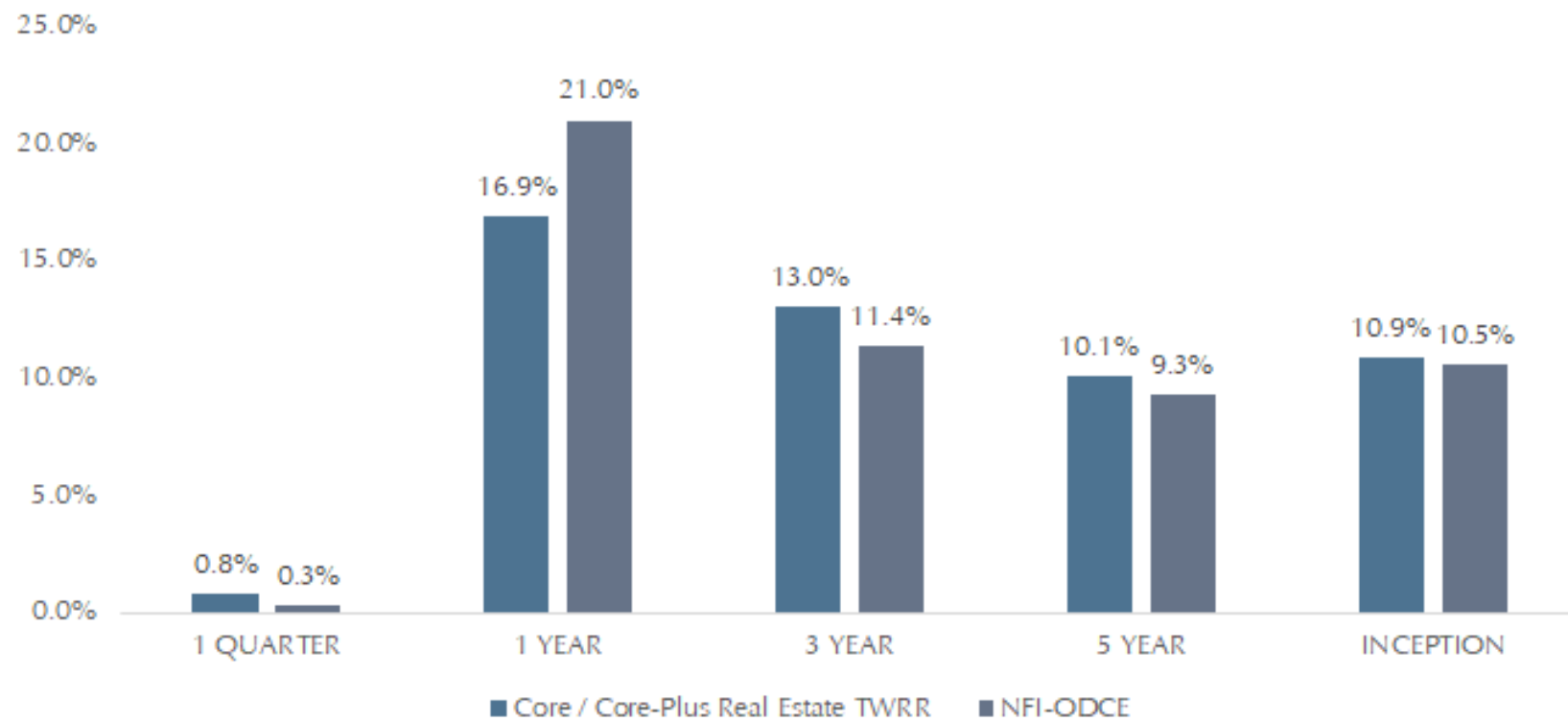


Total RE Portfolio TWRR



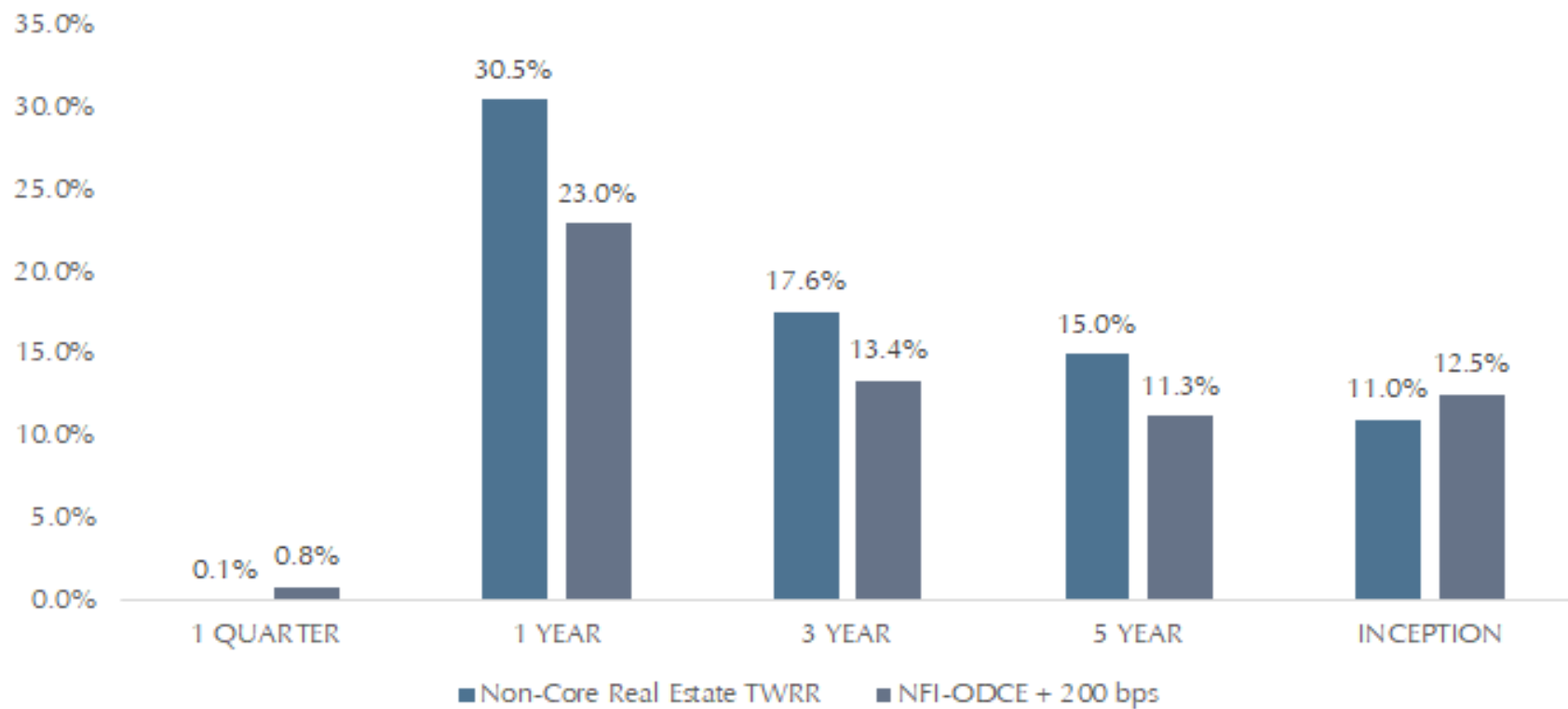
Core/Core Plus TWRR

CORE NET TWRR vs. BENCHMARK



Non-Core TWRR

NON-CORE NET TWRR vs. BENCHMARK



Portfolio Compliance Checklist

Category	Requirement	Portfolio Status
Benchmark	Comprised of NFI-ODCE +100 bps	Portfolio returns outperformed the benchmark over the one-year, three-year, five-year, and since-inception periods and underperformed over the one-quarter period.
Portfolio Construction	Core / Core-Plus (4%) Non-Core (4%)	Market value plus unfunded commitment place the Portfolio at 49% Core/Core-Plus and 51% Non-Core. Based on market value, the Portfolio is 67% Core/Core-Plus and 33% Non-Core.
Real Estate Allocation	Target 8%	Market value plus unfunded commitment place the Portfolio at 15.1% of total plan assets.
Property Type Diversification	Up to 40% Multifamily Up to 35% Industrial Up to 45% Office Up to 35% Retail Up to 25% Hotel Up to 20% Other	All property type allocations are compliant.
Geographic Diversification	Diversified geographically; Max 25% Ex-U.S.	All geographic allocations are compliant.
LTV	65.0%	The leverage (38.7%) is compliant.
Manager Exposure	15% of real estate allocation	All manager allocations are compliant, with EQT Partners AB being the highest at 10.6%.



New Investment Commitments

Fund Name	Month Closed	Strategy	Geographic Focus	Committed capital (\$mil)
EQT Exeter Industrial Value Fund VI	Jul-22	Non-Core	North America	40

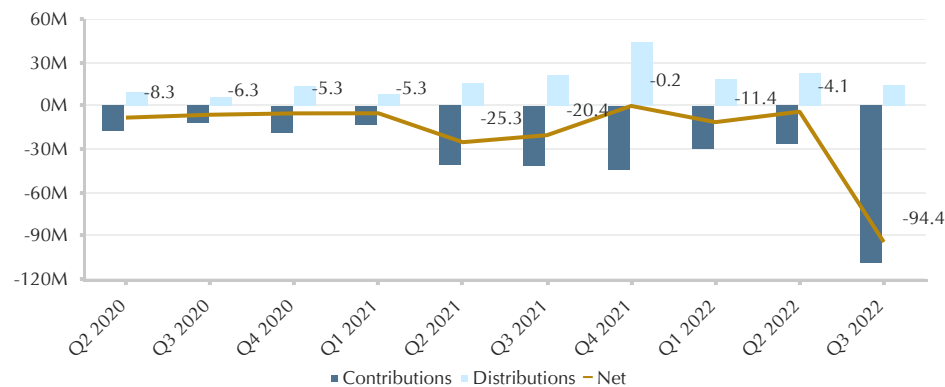
Subsequent Investment Commitments

Fund Name	Month Closed	Strategy	Geographic Focus	Committed capital (\$mil)
N/A	N/A	N/A	N/A	N/A

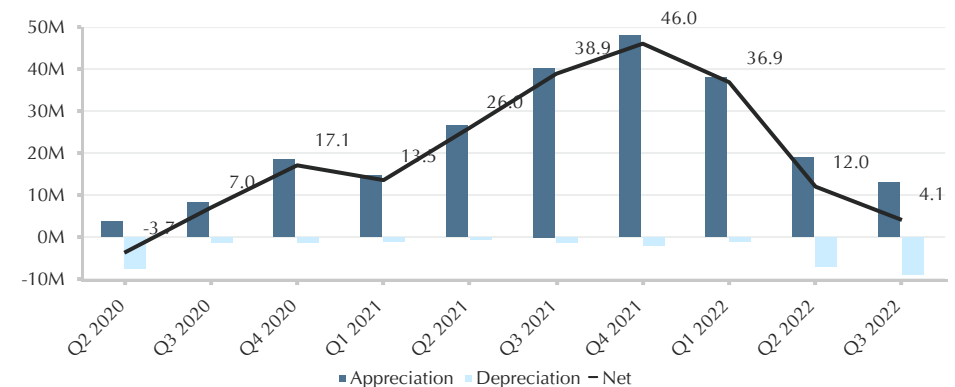
- During the quarter, commitments totaling \$40.0 million closed.
- After quarter-end, no new commitments closed.

	Gain		Loss		Net Gain/Loss		Distributions		Contributions		NAV (mm)
	Total Millions	# Of Funds	Total Millions	# Of Funds	Net Millions	% Of Total Net	Total Millions	%	Total Millions	%	
Core / Core-plus	8.6	12	-5.0	10	3.5	87.4%	6.7	47.0%	79.7	73.3%	503.1
Non-Core	4.4	22	-3.8	16	0.5	12.6%	7.6	53.0%	29.0	26.7%	251.1
Total	12.9	34	-8.9	26	4.1	100.0%	14.3	100.0%	108.7	100.0%	754.1

Cash Flows Quarterly



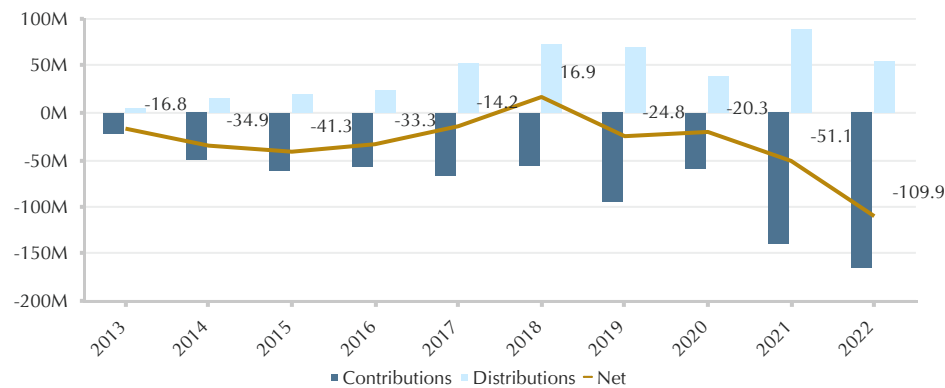
Appreciation/Depreciation Quarterly



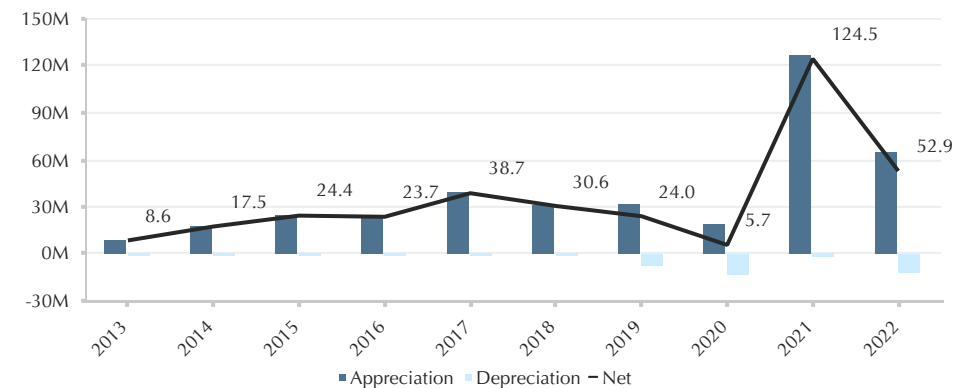
- During the quarter, \$108.7 million was contributed and \$14.3 million was distributed for a net cash outflow of \$94.4 million. 34 funds appreciated (\$12.9 million) and 26 funds depreciated during the quarter (\$8.9 million) for a total net appreciation of \$4.1 million.

	Gain		Loss		Net Gain/Loss		Distributions		Contributions		NAV (mm)
	Total Millions	# Of Funds	Total Millions	# Of Funds	Net Millions	% Of Total Net	Total Millions	%	Total Millions	%	
Core / Core-plus	74.8	19	-0.7	3	74.1	74.9%	27.4	27.7%	125.6	60.1%	503.1
Non-Core	30.3	26	-5.4	12	24.9	25.1%	71.6	72.3%	83.5	39.9%	251.1
Total	105.1	45	-6.1	15	98.9	100.0%	99.0	100.0%	209.1	100.0%	754.1

Cash Flows Yearly



Appreciation/Depreciation Yearly



- During the last twelve months, the portfolio contributed \$209.1 million and distributed \$99.0 million for a net cash outflow of \$110.1 million. 45 funds appreciated (\$105.1 million) and 15 funds depreciated during the last twelve months (\$6.1 million) for a total net appreciation of \$98.9 million.

Vintage	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
2023	-	80.0	0.0	0.0	80.0	80.0	0.0	0.0	n.m.	0.0x
2022	0.4%	86.0	3.9	0.0	78.2	81.5	-0.6	3.3	n.m. ¹	0.9x
2021	15.3%	229.3	106.6	6.5	127.9	243.0	15.1	115.2	n.m. ¹	1.1x
2020	6.2%	70.0	45.7	11.3	22.2	68.8	12.3	46.7	21.6%	1.3x
2019	17.1%	132.7	126.2	14.5	16.2	145.0	17.1	128.8	15.9%	1.1x
2018	4.6%	59.3	43.3	19.5	22.0	56.8	11.0	34.8	14.4%	1.3x
2017	13.8%	97.3	103.5	55.2	7.5	111.8	56.1	104.4	16.2%	1.5x
2016	12.3%	82.2	86.7	39.9	3.9	96.3	45.7	92.4	14.1%	1.5x
2015	9.1%	56.9	58.2	31.3	6.0	75.0	42.0	69.0	14.8%	1.7x
2014	4.8%	55.0	53.8	48.9	12.0	48.1	31.3	36.1	11.0%	1.6x
2013	3.6%	61.5	62.3	54.4	11.5	38.5	19.2	27.0	6.8%	1.3x
2012	0.5%	10.0	12.1	20.6	1.1	4.6	11.9	3.4	18.9%	2.0x
2011	3.6%	71.4	100.3	129.3	3.1	30.6	56.5	27.5	9.2%	1.6x
2010	8.7%	38.6	38.6	15.8	0.0	65.5	42.7	65.5	10.8%	2.1x
NYCBERS - RE	100.0%	1,130.3	841.1	447.4	391.6	1,145.7	360.4	754.1	11.8%	1.4x

The 2020 vintage year overperformance was driven by Cortland Growth and Income. The strong performance of the 2012 vintage year is the result of one non-core investment (Brookfield Strategic Real Estate Partners), while the vintage year with the greatest underperformance (2013) is driven by three NYC Asset Investor portfolios. The 2010 and 2011 vintage years also underperformed. The underperformance of the 2010 vintage year was driven by the performance of LaSalle Property Fund and the 2011 vintage year underperformance is due to Trumbull Property Fund.

Reporting Period: Sep-2010 - Sep-2022

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Vintage	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	Net TVPI	DPI	RVPI	Net IRR
2023	0.0	0.0	0.0	0.0	0.0x	0.0x	0.0x	n.m.
2022	3.9	0.0	3.3	-0.6	0.9x	0.0x	0.9x	n.m. ¹
2021	106.6	6.5	115.2	15.1	1.1x	0.1x	1.1x	n.m. ¹
2020	45.7	11.3	46.7	12.3	1.3x	0.2x	1.0x	21.6%
2019	126.2	14.5	128.8	17.1	1.1x	0.1x	1.0x	15.9%
2018	43.3	19.5	34.8	11.0	1.3x	0.5x	0.8x	14.4%
2017	103.5	55.2	104.4	56.1	1.5x	0.5x	1.0x	16.2%
2016	86.7	39.9	92.4	45.7	1.5x	0.5x	1.1x	14.1%
2015	58.2	31.3	69.0	42.0	1.7x	0.5x	1.2x	14.8%
2014	53.8	48.9	36.1	31.3	1.6x	0.9x	0.7x	11.0%
2013	62.3	54.4	27.0	19.2	1.3x	0.9x	0.4x	6.8%
2012	12.1	20.6	3.4	11.9	2.0x	1.7x	0.3x	18.9%
2011	100.3	129.3	27.5	56.5	1.6x	1.3x	0.3x	9.2%
2010	38.6	15.8	65.5	42.7	2.1x	0.4x	1.7x	10.8%

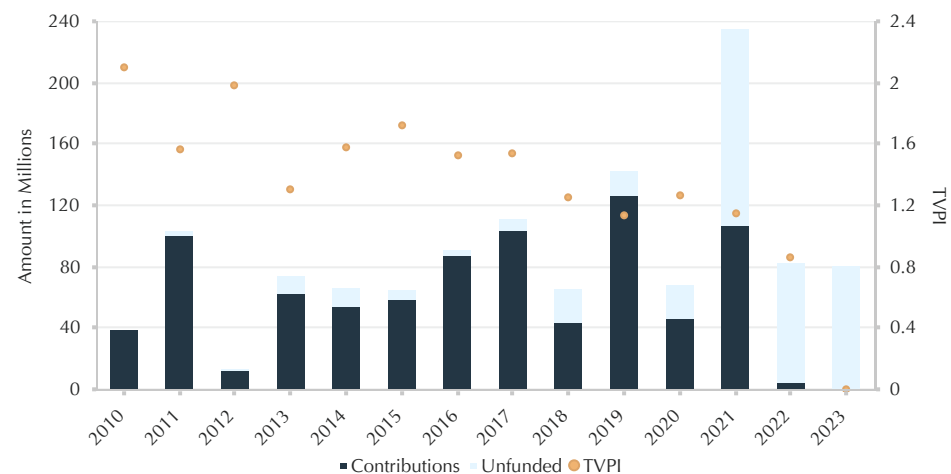
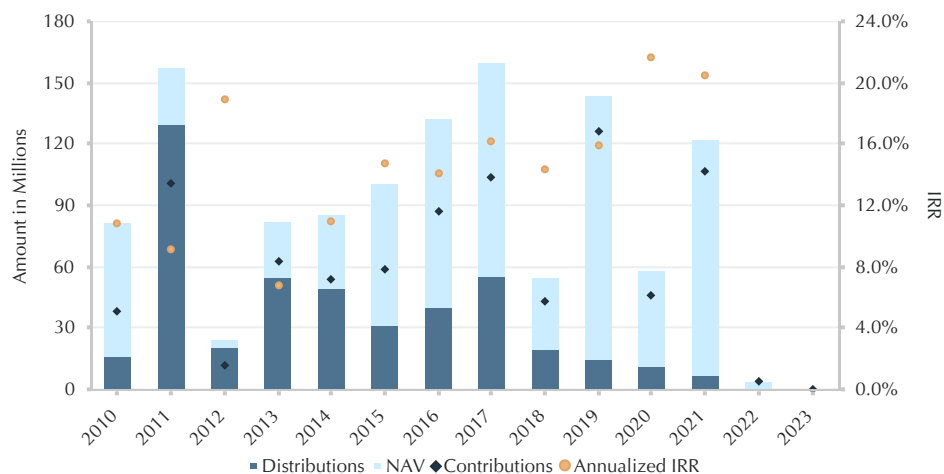
The 2020 vintage year overperformance was driven by Cortland Growth and Income. The strong performance of the 2012 vintage year is the result of one non-core investment (Brookfield Strategic Real Estate Partners), while the vintage year with the greatest underperformance (2013) is driven by three NYC Asset Investor portfolios. The 2010 and 2011 vintage years also underperformed. The underperformance of the 2010 vintage year was driven by the performance of LaSalle Property Fund and the 2011 vintage year underperformance is due to Trumbull Property Fund.

Reporting Period: Sep-2010 - Sep-2022

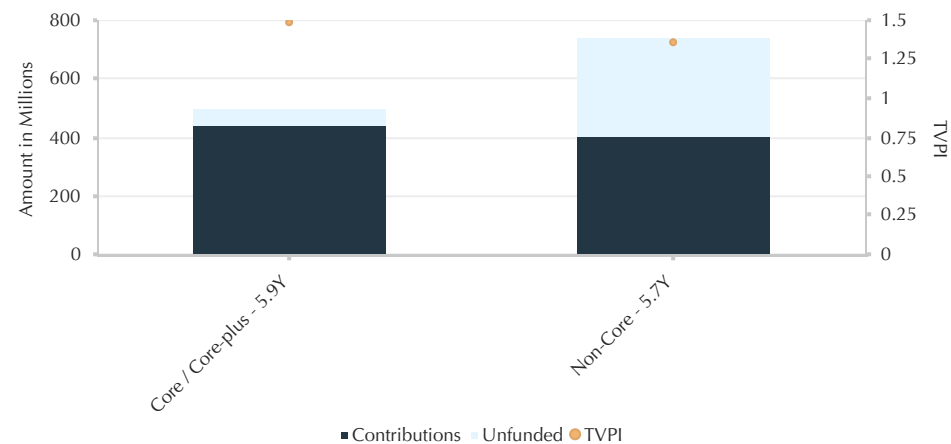
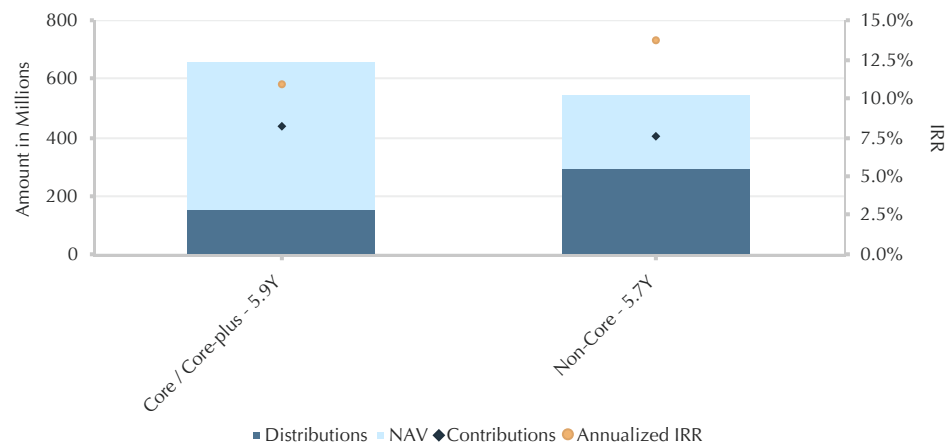
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Performance Review by Vintage Year

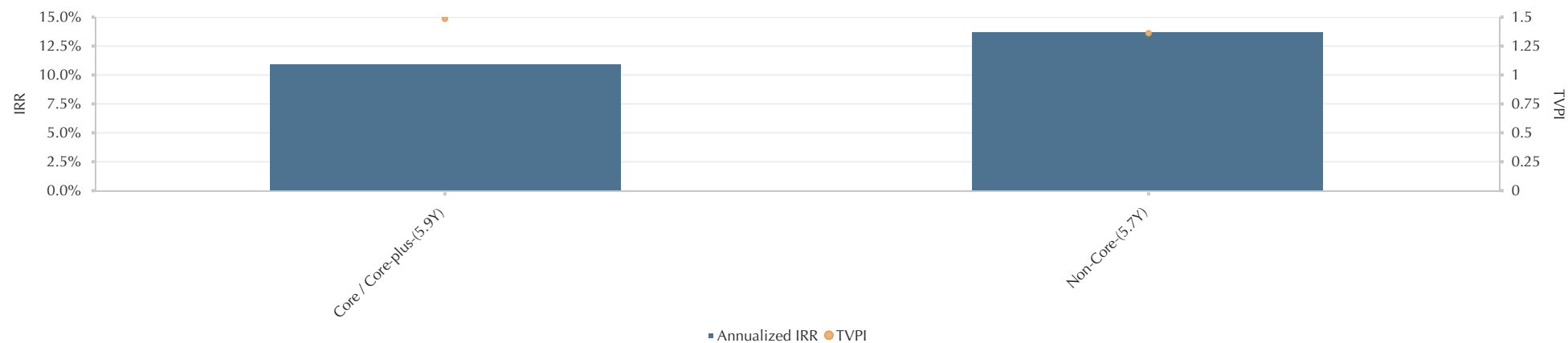


	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	Net TVPI	DPI	RVPI	Net IRR
Strategy								
Non-Core	401.2	293.8	251.1	143.7	1.4x	0.7x	0.6x	13.7%
Core / Core-plus	439.9	153.5	503.1	216.7	1.5x	0.3x	1.1x	10.9%
EM/Debt								
Emerging	24.7	18.4	14.0	7.6	1.3x	0.7x	0.6x	16.0%
Debt	111.0	44.0	81.4	14.4	1.1x	0.4x	0.7x	6.0%



Performance by Strategy

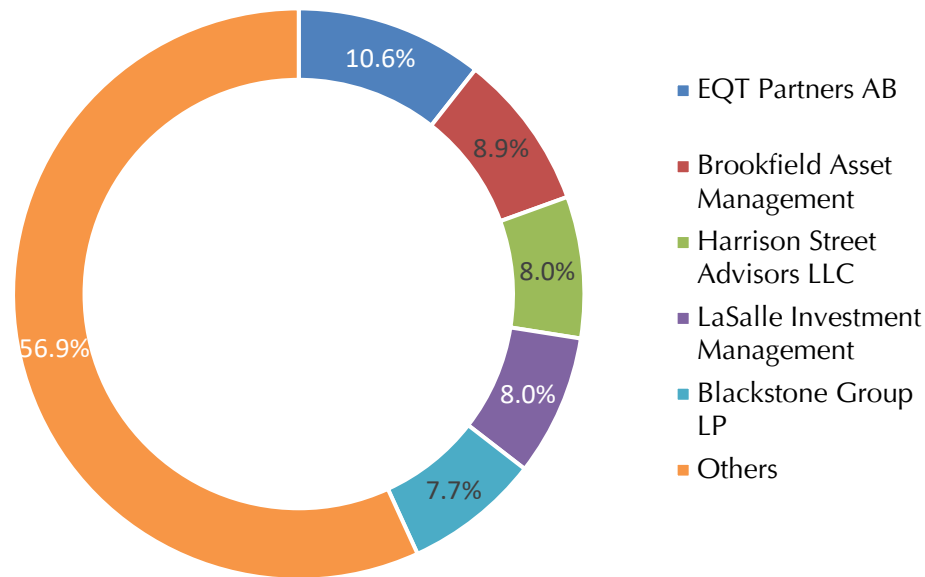
By Strategy



Weighted Average Age (WAA) is based on contributions
WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

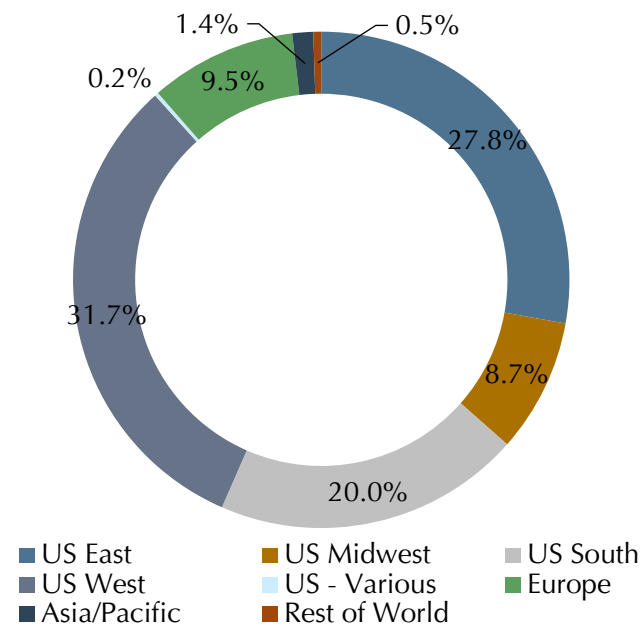
	Total Commitments (\$mm)	Unfunded + NAV Commitments (\$mm)	% of Portfolio (Unfunded + NAV)	Contributions (\$mm)	Distributions (\$mm)	Number of Holdings	Net TVPI
EQT Partners AB	117.7	121.4	10.6%	39.0	24.4	6	1.7x
Brookfield Asset Management	86.0	101.5	8.9%	57.7	27.1	4	1.6x
Harrison Street Advisors LLC	85.0	91.7	8.0%	86.3	1.6	2	1.1x
LaSalle Investment Management	63.6	91.5	8.0%	50.2	16.1	3	1.9x
Blackstone Group LP	104.0	88.0	7.7%	66.1	64.7	4	1.5x
Total Portfolio (33)	1,130.3	1,145.7	100.0%	841.1	447.4	62	1.4x

EXPOSURE BY MANAGER



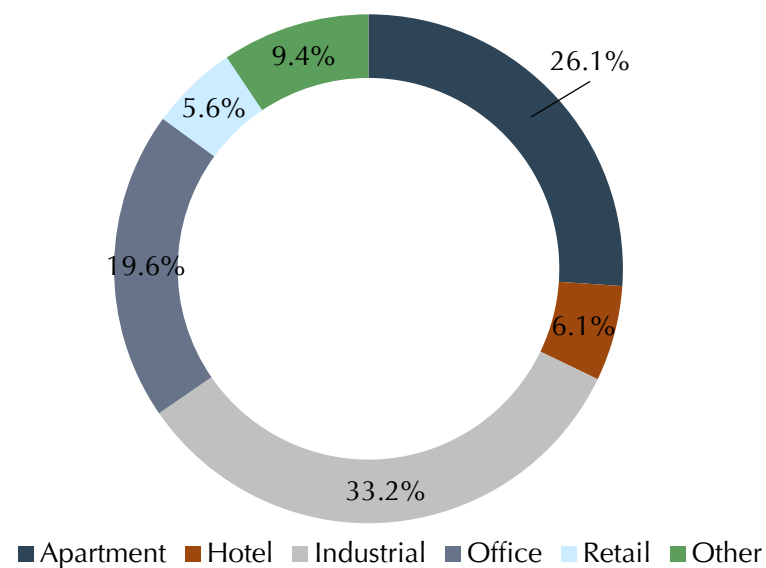
Geographic Exposure by NAV

	NAV	NFI ODCE
US East North Central	6.8%	5.5%
US Mid East	8.3%	8.2%
US Mountain	6.8%	7.1%
US North East	19.5%	21.1%
US Pacific	24.9%	37.2%
US South East	11.5%	10.8%
US South West	8.4%	9.2%
US West North Central	1.9%	0.8%
US – Various	0.2%	0.1%
Europe	9.5%	N/A
Asia/Pacific	1.4%	N/A
Rest of World	0.5%	N/A



Property Type Exposure by NAV

	NAV	NFI ODCE
Apartment	26.1%	29.0%
Hotel	6.1%	0.0%
Industrial	33.2%	30.9%
Office	19.6%	23.1%
Retail	5.6%	9.8%
Other	9.4%	7.2%



	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Core / Core-plus											
Almanac Realty Securities VIII	USD	0.7%	10.5	5.8	1.4	5.5	11.0	1.1	5.5	13.1%	1.2x
Almanac Realty Securities VIII (Sidecar II)	USD	0.6%	7.0	4.0	1.0	3.2	7.4	1.3	4.2	20.7%	1.3x
Artemis Real Estate Partners Income and Growth Fund	USD	0.7%	10.0	6.8	1.9	4.3	9.8	0.6	5.5	6.1%	1.1x
Brookfield Premier Real Estate Partners	USD	5.6%	25.0	29.0	4.0	0.0	42.4	17.4	42.4	16.2%	1.6x
Cortland Growth and Income	USD	2.2%	10.0	11.1	1.1	0.0	16.6	6.6	16.6	25.8%	1.6x
EQT Exeter Industrial Core-Plus Fund IV	USD	0.5%	40.0	3.9	0.0	36.1	39.6	-0.4	3.5	n.m. ¹	0.9x
Exeter Core Industrial Club Fund II	USD	2.5%	10.0	9.7	4.0	0.3	19.4	13.3	19.1	22.9%	2.4x
Exeter Industrial Core Fund III	USD	1.7%	12.7	12.5	1.2	0.2	13.4	1.9	13.2	11.3%	1.2x
Harrison Street Core Property Fund	USD	11.3%	80.0	81.5	1.3	0.0	85.0	4.7	85.0	9.5%	1.1x
Heitman Core Real Estate Debt Income Trust	USD	3.8%	25.0	28.5	3.7	0.0	28.4	3.5	28.4	6.3%	1.1x
HSRE-Centre Street Core Co-Investment	USD	0.9%	5.0	4.8	0.3	0.3	6.7	2.0	6.5	16.5%	1.4x
Jamestown Premier Property Fund	USD	0.7%	6.2	7.4	3.0	0.0	5.2	0.8	5.2	2.8%	1.1x
LaSalle GPS Co-Investment Program – Core	USD	0.9%	10.0	6.1	0.1	3.9	10.6	0.8	6.8	n.m. ¹	1.1x
LaSalle Property Fund	USD	8.7%	38.6	38.6	15.8	0.0	65.5	42.7	65.5	10.8%	2.1x
Lion Industrial Trust	USD	6.6%	18.0	24.0	4.7	0.0	49.9	30.6	49.9	22.2%	2.3x
MetLife Core Property Fund	USD	3.4%	15.0	15.0	5.5	0.0	25.9	16.4	25.9	11.2%	2.1x
NYC Asset Investor #2	USD	1.2%	11.0	11.2	4.7	0.4	9.1	2.3	8.7	3.4%	1.2x
NYCRS Artemis Mach II	USD	0.7%	11.0	12.8	15.2	0.8	6.0	7.6	5.2	17.2%	1.6x
RREEF America REIT II	USD	2.9%	17.0	17.0	0.6	0.0	21.6	5.2	21.6	n.m. ¹	1.3x
RREEF Core Plus Industrial Fund	USD	4.1%	25.0	25.4	0.4	0.0	31.1	6.1	31.1	n.m. ¹	1.2x
Trumbull Property Fund	USD	3.5%	41.4	64.3	81.0	0.0	26.5	43.2	26.5	7.9%	1.7x
USAA Eagle Real Estate Feeder 1	USD	3.5%	18.0	20.5	2.6	0.0	26.7	8.8	26.7	8.2%	1.4x

Portfolio Summary by Strategy

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Total Core / Core-plus	USD	66.7%	446.4	439.9	153.5	54.9	558.0	216.7	503.1	10.9%	1.5x
Non-Core											
Aermont Capital Real Estate Fund IV	USD	0.6%	9.8	6.2	0.0	3.5	8.3	-1.4	4.8	-14.8%	0.8x
Aermont Capital Real Estate Fund V	USD	0.0%	34.3	0.0	0.0	30.4	30.2	-0.2	-0.2	n.m.	0.0x
Almanac Realty Securities IX	USD	0.4%	23.3	3.4	0.0	19.9	23.0	-0.3	3.1	n.m. ¹	0.9x
Almanac Realty Securities IX (Sidecar II)	USD	0.0%	11.7	0.0	0.0	11.7	11.7	0.01	0.01	n.m.	0.0x
Artemis Real Estate Partners Healthcare Fund II	USD	0.2%	15.0	2.4	0.6	13.2	14.8	-0.2	1.6	n.m. ¹	0.9x
BIG Real Estate Fund II	USD	1.2%	25.0	11.8	3.1	16.1	24.8	0.04	8.7	n.m. ¹	1.0x
Blackstone Real Estate Partners Europe IV (USD)	USD	0.8%	32.5	32.6	40.8	6.0	12.0	14.2	6.0	11.7%	1.4x
Blackstone Real Estate Partners IX	USD	2.3%	15.0	14.8	4.7	3.1	20.2	6.9	17.1	34.5%	1.5x
Blackstone Real Estate Partners VIII	USD	1.8%	16.5	18.7	19.2	2.4	15.9	14.0	13.5	17.8%	1.7x
Blackstone Real Estate Partners X	USD	-	40.0	0.0	0.0	40.0	40.0	0.0	0.0 ²	n.m.	0.0x
Brookfield Strategic Real Estate Partners	USD	0.5%	10.0	12.1	20.6	1.1	4.6	11.9	3.4	18.9%	2.0x
Brookfield Strategic Real Estate Partners III	USD	1.4%	12.0	10.2	2.5	4.2	14.9	3.0	10.7	13.8%	1.3x
Brookfield Strategic Real Estate Partners IV	USD	0.9%	39.0	6.3	0.0	32.7	39.7	0.7	7.0	n.m. ¹	1.1x
Carlyle Realty Partners VII	USD	0.8%	25.0	23.2	27.9	12.0	18.2	10.9	6.2	13.0%	1.5x
DivcoWest Fund V	USD	1.0%	10.0	8.0	2.9	2.0	9.3	2.2	7.3	7.3%	1.3x
DivcoWest Fund VI	USD	0.5%	10.0	4.1	0.2	6.0	10.0	0.1	4.0	n.m. ¹	1.0x
DRA Growth and Income Fund IX	USD	1.0%	10.0	10.9	10.1	0.9	8.5	6.8	7.6	19.1%	1.6x
EQT Exeter Industrial Value Fund VI	USD	-	40.0	0.0	0.0	40.0	40.0	0.0	0.0 ²	n.m.	0.0x
European Property Investors Special Opportunities 4	USD	1.2%	11.2	10.2	4.2	1.3	10.6	3.3	9.3	7.4%	1.3x
Exeter Industrial Value Fund IV	USD	0.2%	10.0	9.4	19.2	0.6	2.0	11.2	1.4	30.9%	2.2x
Exeter Industrial Value Fund V	USD	0.7%	5.0	3.5	0.0	1.5	7.0	2.0	5.5	n.m. ¹	1.6x

Reporting Period: As Of Sep-2022

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Board of Education
Retirement System

Aksia

	Currency	NAV Weight	Total Commitment (mm)	Contributions (mm)	Distributions (mm)	Unfunded Commitment (mm)	Total Exposure (mm)	Gain/Loss (mm)	NAV (mm)	Net IRR	TVPI
Franklin Templeton Private Real Estate Fund	USD	0.1%	30.0	36.0	48.4	3.1	4.0	13.3	1.0	19.2%	1.4x
Greenoak Asia (USD) III	USD	0.5%	10.0	8.0	5.3	5.8	9.4	0.8	3.5	12.6%	1.1x
H/2 Special Opportunities III	USD	0.5%	15.0	15.6	15.6	0.0	4.0	4.0	4.0	7.5%	1.3x
H/2 Special Opportunities IV	USD	1.3%	10.0	10.1	2.3	0.0	9.5	1.8	9.5	5.9%	1.2x
KKR Real Estate Partners Americas II	USD	0.5%	10.0	10.3	12.7	1.3	5.4	6.4	4.0	27.8%	1.6x
KKR Real Estate Partners Americas III	USD	2.7%	35.0	20.1	1.3	15.7	35.7	1.3	20.0	n.m. ¹	1.1x
KKR Real Estate Partners Europe II	USD	0.8%	10.0	6.6	1.4	3.9	10.0	0.9	6.1	16.8%	1.1x
KKR Real Estate Securities Dislocation Opportunity Co-Investment Fund	USD	0.1%	10.0	6.0	6.7	0.06	0.8	1.4	0.7	n.m. ¹	1.2x
LaSalle GPS Co-investment Program - Non-Core	USD	0.8%	15.0	5.4	0.2	9.6	15.3	0.5	5.8	n.m. ¹	1.1x
Lone Star Real Estate Fund V	USD	0.4%	11.0	7.7	4.0	3.5	6.4	-0.8	2.8	-5.8%	0.9x
Mesirow Financial Real Estate Value Fund IV	USD	1.3%	25.0	8.5	0.1	16.8	26.3	1.1	9.5	n.m. ¹	1.1x
NYC Asset Investor #1	USD	0.8%	10.0	12.8	7.4	2.9	9.1	0.8	6.3	1.3%	1.1x
NYC Asset Investor #3	USD	0.8%	8.0	5.7	1.5	2.3	8.3	1.9	6.1	5.4%	1.3x
NYCRS-KKR CMBS Retention Partners	USD	1.4%	13.0	12.1	4.5	1.4	12.2	3.2	10.8	6.7%	1.3x
Pramerica Real Estate Capital VI	USD	0.5%	10.3	10.8	8.8	1.1	4.6	1.5	3.5	7.3%	1.1x
PW Real Estate Fund III	USD	2.6%	11.2	8.8	5.2	2.3	21.8	15.9	19.5	30.7%	2.8x
Rialto Real Estate Fund IV - Debt	USD	1.8%	25.0	14.4	1.9	10.7	24.4	1.2	13.7	n.m. ¹	1.1x
Westbrook Real Estate Co-Investment Partnership X	USD	0.5%	10.0	9.7	8.5	0.8	4.5	2.5	3.7	10.9%	1.3x
Westbrook Real Estate Fund XI	USD	0.5%	10.0	4.6	1.8	6.8	10.4	0.8	3.6	n.m. ¹	1.2x
Total Non-Core	USD	33.3%	683.9	401.2	293.8	336.7	587.7	143.7	251.1	13.7%	1.4x
NYCBERS - RE	USD	100.0%	1,130.3	841.1	447.4	391.6	1,145.7	360.4	754.1	11.8%	1.4x

¹ IRR not meaningful for investments held less than 24 months² Adjusted for additional contributions and distributions since last valuation, which is prior to the report date.

	Currency	Vintage	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	TVPI	DPI	RVPI	IRR
Core / Core-plus										
Almanac Realty Securities VIII	USD	2018	5.8	1.4	5.5	1.1	1.2x	0.2x	1.0x	13.1%
Almanac Realty Securities VIII (Sidecar II)	USD	2018	4.0	1.0	4.2	1.3	1.3x	0.3x	1.1x	20.7%
Artemis Real Estate Partners Income and Growth Fund	USD	2018	6.8	1.9	5.5	0.6	1.1x	0.3x	0.8x	6.1%
Brookfield Premier Real Estate Partners	USD	2016	29.0	4.0	42.4	17.4	1.6x	0.1x	1.5x	16.2%
Cortland Growth and Income	USD	2020	11.1	1.1	16.6	6.6	1.6x	0.1x	1.5x	25.8%
EQT Exeter Industrial Core-Plus Fund IV	USD	2022	3.9	0.0	3.5	-0.4	0.9x	0.0x	0.9x	n.m. ¹
Exeter Core Industrial Club Fund II	USD	2016	9.7	4.0	19.1	13.3	2.4x	0.4x	2.0x	22.9%
Exeter Industrial Core Fund III	USD	2019	12.5	1.2	13.2	1.9	1.2x	0.1x	1.1x	11.3%
Harrison Street Core Property Fund	USD	2019	81.5	1.3	85.0	4.7	1.1x	0.0x	1.0x	9.5%
Heitman Core Real Estate Debt Income Trust	USD	2017	28.5	3.7	28.4	3.5	1.1x	0.1x	1.0x	6.3%
HSRE-Centre Street Core Co-Investment	USD	2019	4.8	0.3	6.5	2.0	1.4x	0.1x	1.3x	16.5%
Jamestown Premier Property Fund	USD	2016	7.4	3.0	5.2	0.8	1.1x	0.4x	0.7x	2.8%
LaSalle GPS Co-Investment Program – Core	USD	2021	6.1	0.1	6.8	0.8	1.1x	0.0x	1.1x	n.m. ¹
LaSalle Property Fund	USD	2010	38.6	15.8	65.5	42.7	2.1x	0.4x	1.7x	10.8%
Lion Industrial Trust	USD	2017	24.0	4.7	49.9	30.6	2.3x	0.2x	2.1x	22.2%
MetLife Core Property Fund	USD	2014	15.0	5.5	25.9	16.4	2.1x	0.4x	1.7x	11.2%
NYC Asset Investor #2	USD	2013	11.2	4.7	8.7	2.3	1.2x	0.4x	0.8x	3.4%
NYCRS Artemis Mach II	USD	2016	12.8	15.2	5.2	7.6	1.6x	1.2x	0.4x	17.2%
RREEF America REIT II	USD	2021	17.0	0.6	21.6	5.2	1.3x	0.0x	1.3x	n.m. ¹
RREEF Core Plus Industrial Fund	USD	2021	25.4	0.4	31.1	6.1	1.2x	0.0x	1.2x	n.m. ¹
Trumbull Property Fund	USD	2011	64.3	81.0	26.5	43.2	1.7x	1.3x	0.4x	7.9%
USAA Eagle Real Estate Feeder 1	USD	2015	20.5	2.6	26.7	8.8	1.4x	0.1x	1.3x	8.2%
Total Core / Core-plus	USD		439.9	153.5	503.1	216.7	1.5x	0.3x	1.1x	10.9%

	Currency	Vintage	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	TVPI	DPI	RVPI	IRR
Non-Core										
Aermont Capital Real Estate Fund IV	USD	2018	6.2	0.0	4.8	-1.4	0.8x	0.0x	0.8x	-14.8%
Aermont Capital Real Estate Fund V	USD	2022	0.0	0.0	-0.2	-0.2	0.0x	0.0x	0.0x	n.m.
Almanac Realty Securities IX	USD	2021	3.4	0.0	3.1	-0.3	0.9x	0.0x	0.9x	n.m. ¹
Almanac Realty Securities IX (Sidecar II)	USD	2022	0.0	0.0	0.01	0.01	0.0x	0.0x	0.0x	n.m.
Artemis Real Estate Partners Healthcare Fund II	USD	2021	2.4	0.6	1.6	-0.2	0.9x	0.2x	0.7x	n.m. ¹
BIG Real Estate Fund II	USD	2021	11.8	3.1	8.7	0.04	1.0x	0.3x	0.7x	n.m. ¹
Blackstone Real Estate Partners Europe IV (USD)	USD	2013	32.6	40.8	6.0	14.2	1.4x	1.3x	0.2x	11.7%
Blackstone Real Estate Partners IX	USD	2019	14.8	4.7	17.1	6.9	1.5x	0.3x	1.2x	34.5%
Blackstone Real Estate Partners VIII	USD	2015	18.7	19.2	13.5	14.0	1.7x	1.0x	0.7x	17.8%
Blackstone Real Estate Partners X	USD	2023	0.0	0.0	0.0 ²	0.0	0.0x	0.0x	0.0x	n.m.
Brookfield Strategic Real Estate Partners	USD	2012	12.1	20.6	3.4	11.9	2.0x	1.7x	0.3x	18.9%
Brookfield Strategic Real Estate Partners III	USD	2018	10.2	2.5	10.7	3.0	1.3x	0.2x	1.0x	13.8%
Brookfield Strategic Real Estate Partners IV	USD	2021	6.3	0.0	7.0	0.7	1.1x	0.0x	1.1x	n.m. ¹
Carlyle Realty Partners VII	USD	2014	23.2	27.9	6.2	10.9	1.5x	1.2x	0.3x	13.0%
DivcoWest Fund V	USD	2016	8.0	2.9	7.3	2.2	1.3x	0.4x	0.9x	7.3%
DivcoWest Fund VI	USD	2020	4.1	0.2	4.0	0.1	1.0x	0.0x	1.0x	n.m. ¹
DRA Growth and Income Fund IX	USD	2017	10.9	10.1	7.6	6.8	1.6x	0.9x	0.7x	19.1%
EQT Exeter Industrial Value Fund VI	USD	2023	0.0	0.0	0.0 ²	0.0	0.0x	0.0x	0.0x	n.m.
European Property Investors Special Opportunities 4	USD	2015	10.2	4.2	9.3	3.3	1.3x	0.4x	0.9x	7.4%
Exeter Industrial Value Fund IV	USD	2017	9.4	19.2	1.4	11.2	2.2x	2.0x	0.1x	30.9%
Exeter Industrial Value Fund V	USD	2020	3.5	0.0	5.5	2.0	1.6x	0.0x	1.6x	n.m. ¹
Franklin Templeton Private Real Estate Fund	USD	2011	36.0	48.4	1.0	13.3	1.4x	1.3x	0.0x	19.2%
Greenoak Asia (USD) III	USD	2019	8.0	5.3	3.5	0.8	1.1x	0.7x	0.4x	12.6%

	Currency	Vintage	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	TVPI	DPI	RVPI	IRR
H/2 Special Opportunities III	USD	2014	15.6	15.6	4.0	4.0	1.3x	1.0x	0.3x	7.5%
H/2 Special Opportunities IV	USD	2016	10.1	2.3	9.5	1.8	1.2x	0.2x	0.9x	5.9%
KKR Real Estate Partners Americas II	USD	2018	10.3	12.7	4.0	6.4	1.6x	1.2x	0.4x	27.8%
KKR Real Estate Partners Americas III	USD	2021	20.1	1.3	20.0	1.3	1.1x	0.1x	1.0x	n.m. ¹
KKR Real Estate Partners Europe II	USD	2020	6.6	1.4	6.1	0.9	1.1x	0.2x	0.9x	16.8%
KKR Real Estate Securities Dislocation Opportunity Co-In	USD	2020	6.0	6.7	0.7	1.4	1.2x	1.1x	0.1x	n.m. ¹
LaSalle GPS Co-investment Program - Non-Core	USD	2021	5.4	0.2	5.8	0.5	1.1x	0.0x	1.1x	n.m. ¹
Lone Star Real Estate Fund V	USD	2017	7.7	4.0	2.8	-0.8	0.9x	0.5x	0.4x	-5.8%
Mesirow Financial Real Estate Value Fund IV	USD	2021	8.5	0.1	9.5	1.1	1.1x	0.0x	1.1x	n.m. ¹
NYC Asset Investor #1	USD	2013	12.8	7.4	6.3	0.8	1.1x	0.6x	0.5x	1.3%
NYC Asset Investor #3	USD	2013	5.7	1.5	6.1	1.9	1.3x	0.3x	1.1x	5.4%
NYCRS-KKR CMBS Retention Partners	USD	2017	12.1	4.5	10.8	3.2	1.3x	0.4x	0.9x	6.7%
Pramerica Real Estate Capital VI	USD	2017	10.8	8.8	2.3	0.3	1.0x	0.8x	0.2x	1.6%
PW Real Estate Fund III	USD	2015	8.8	5.2	19.5	15.9	2.8x	0.6x	2.2x	30.7%
Rialto Real Estate Fund IV - Debt	USD	2020	14.4	1.9	13.7	1.2	1.1x	0.1x	1.0x	n.m. ¹
Westbrook Real Estate Co-Investment Partnership X	USD	2016	9.7	8.5	3.7	2.5	1.3x	0.9x	0.4x	10.9%
Westbrook Real Estate Fund XI	USD	2019	4.6	1.8	3.6	0.8	1.2x	0.4x	0.8x	n.m. ¹
Total Non-Core	USD		401.2	293.8	251.1	143.7	1.4x	0.7x	0.6x	13.7%
NYCBERS - RE	USD		841.1	447.4	754.1	360.4	1.4x	0.5x	0.9x	11.8%

¹ IRR not meaningful for investments held less than 24 months² Adjusted for additional contributions and distributions since last valuation, which is prior to the report date.

* Total figures take into account all current and closed portfolio positions as at Sep-2022

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Infrastructure Quarterly Report (Public):

NYC Board of Education Retirement System

NYCBERS - INFRA

Portfolio Report

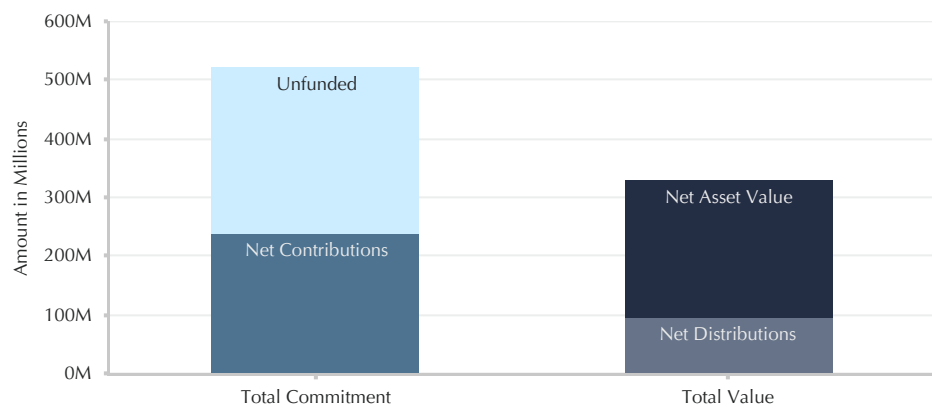
As Of September 2022

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Summary



Portfolio Summary

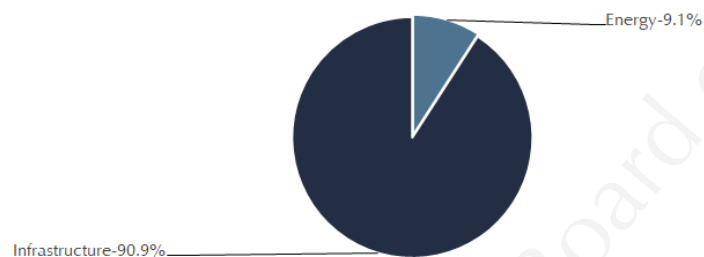
Total Pension Assets	\$7.6 bn as of 09/30/2022
GP Relationships	12
Holdings	30
# of New Investments within the quarter*	1
# of Underlying Active Investments	258
% of Public Companies	9.7%
Total Commitment Amount	\$527.6 mm
Net Contributions	\$238.1 mm
Net Distributions	\$95.1 mm
Net Asset Value	\$234.5 mm
Weighted Average Age	4.9Y
Unfunded Commitment	\$284.1 mm
Minimum Annual Pacing	\$140.0 mm
Maximum Annual Pacing	\$210.0 mm
Portfolio Allocation	3.1%
Minimum Target Allocation	2.0%
Maximum Target Allocation	6.0%

1Y IRR	9.1%	2Y IRR	12.4%	3Y IRR	11.8%
5Y IRR	11.5%	7Y IRR	12.0%	ITD IRR**	12.0%
				ITD TVPI**	1.3x

* Jul-2022 - Sep-2022

** Jul-2013 - Sep-2022

Unfunded + NAV by Strategy



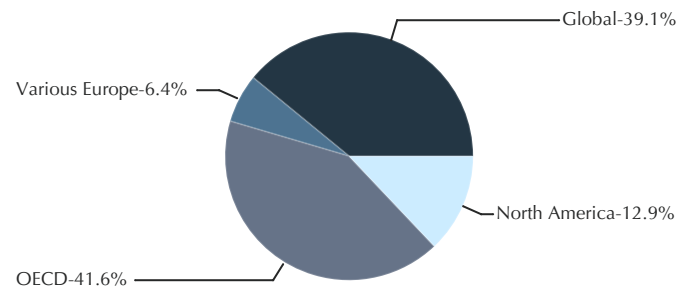
Position Analytics data based on GP provided information as of Sep-2022

IRR not meaningful for investments held less than 24 months

Weighted Average Age (WAA) is based on contributions

WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

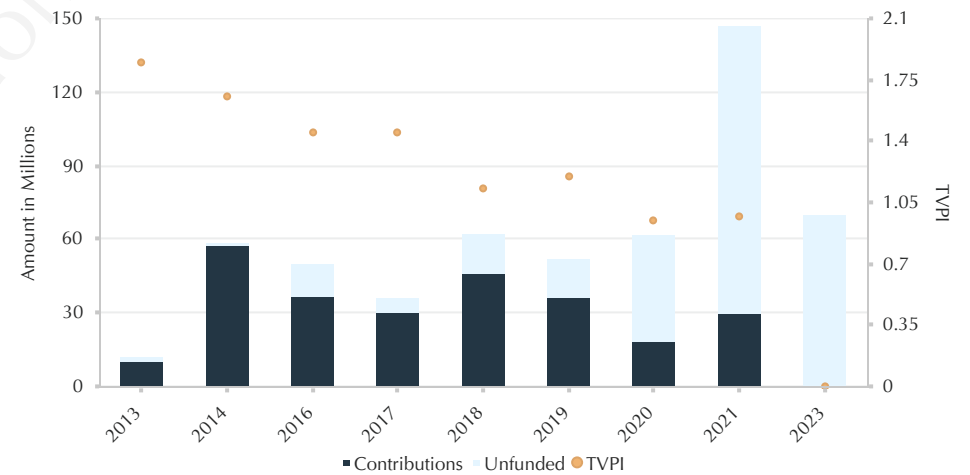
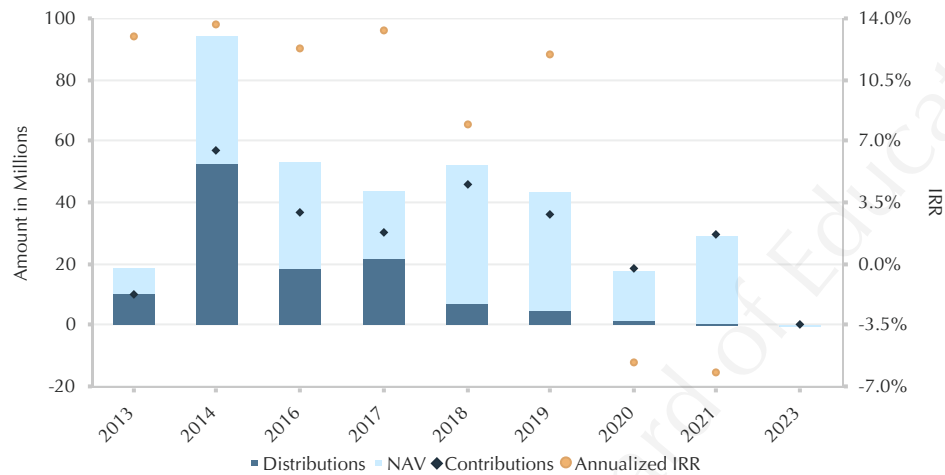
Unfunded + NAV by Region



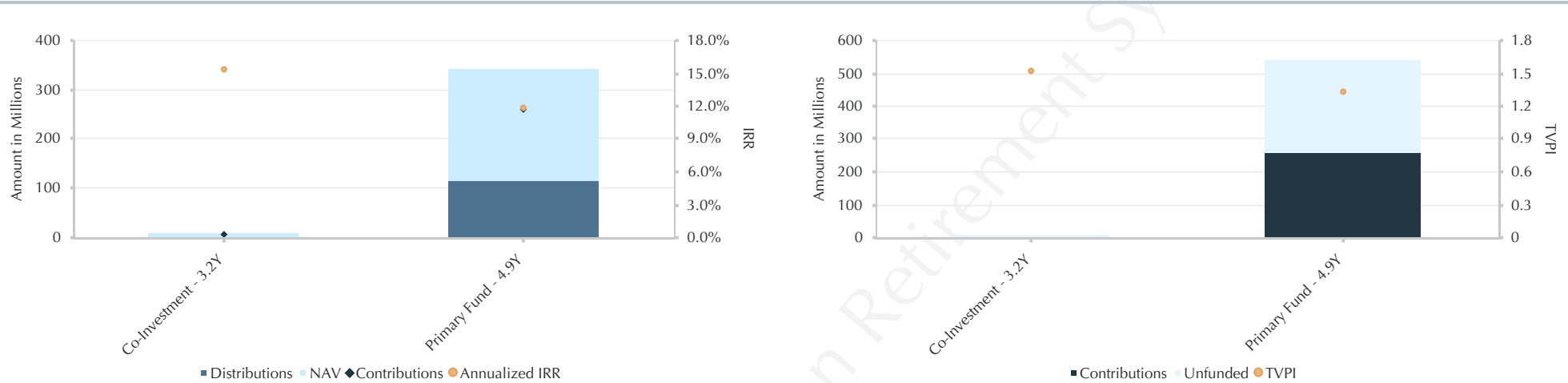
Strategy Portfolio Summary

	# Of Funds	Weighted Average Age	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Unfunded + NAV (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Annualized IRR	TVPI
Energy	4	5.2	9.8	52.3	37.6	47.4	18.1	12.4	9.8%	1.2x
Infrastructure	26	4.9	224.7	475.3	246.6	471.3	246.0	104.0	12.1%	1.3x
NYCBERS - INFRA	30	4.9	234.5	527.6	284.1	518.7	264.1	116.5	12.0%	1.3x

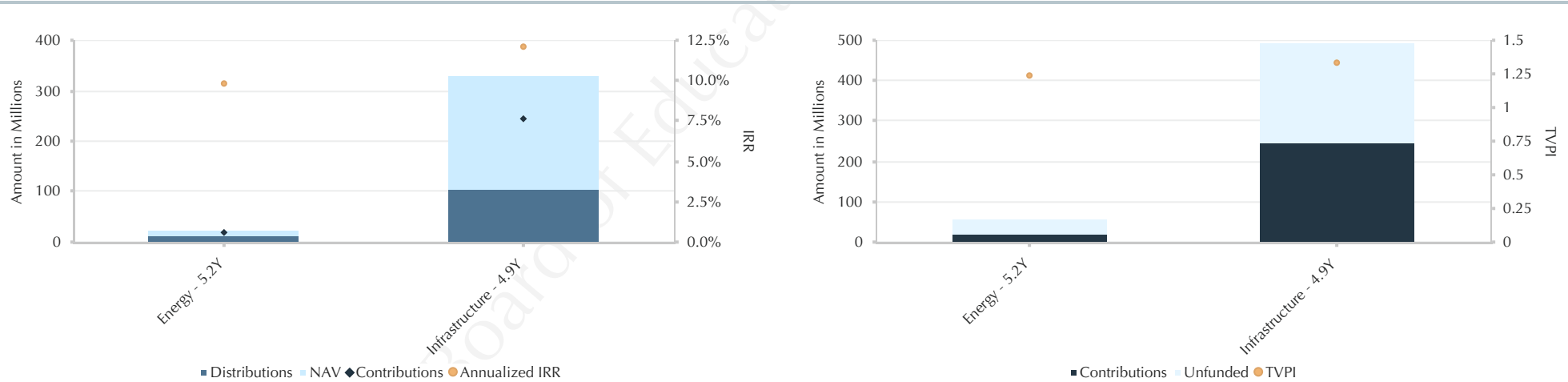
Performance Review by Vintage Year



Performance Review by Structure

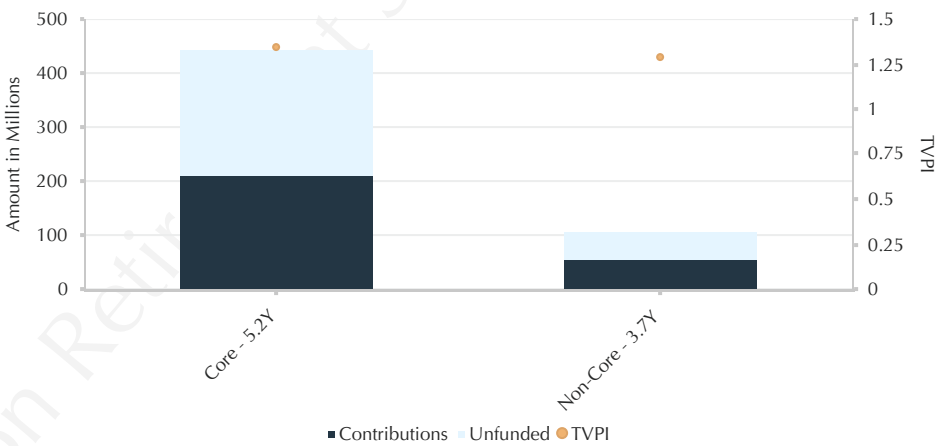
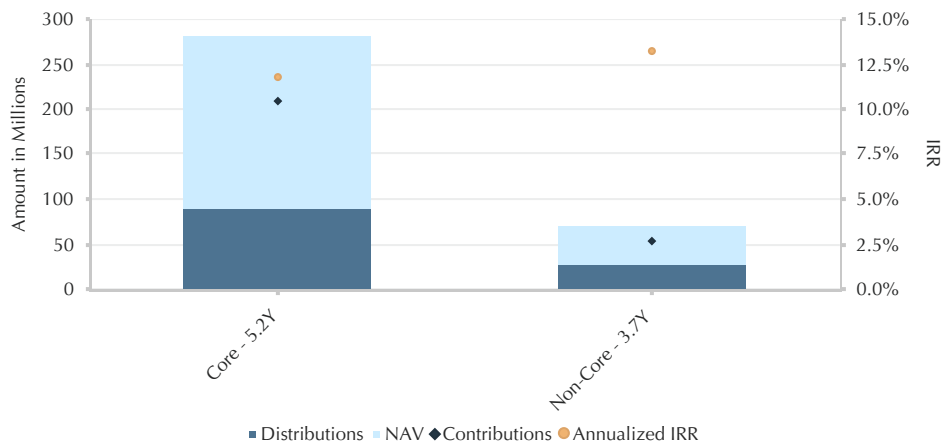


Performance Review by Strategy



Weighted Average Age (WAA) is based on contributions
WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Performance Review by Sub-Strategy



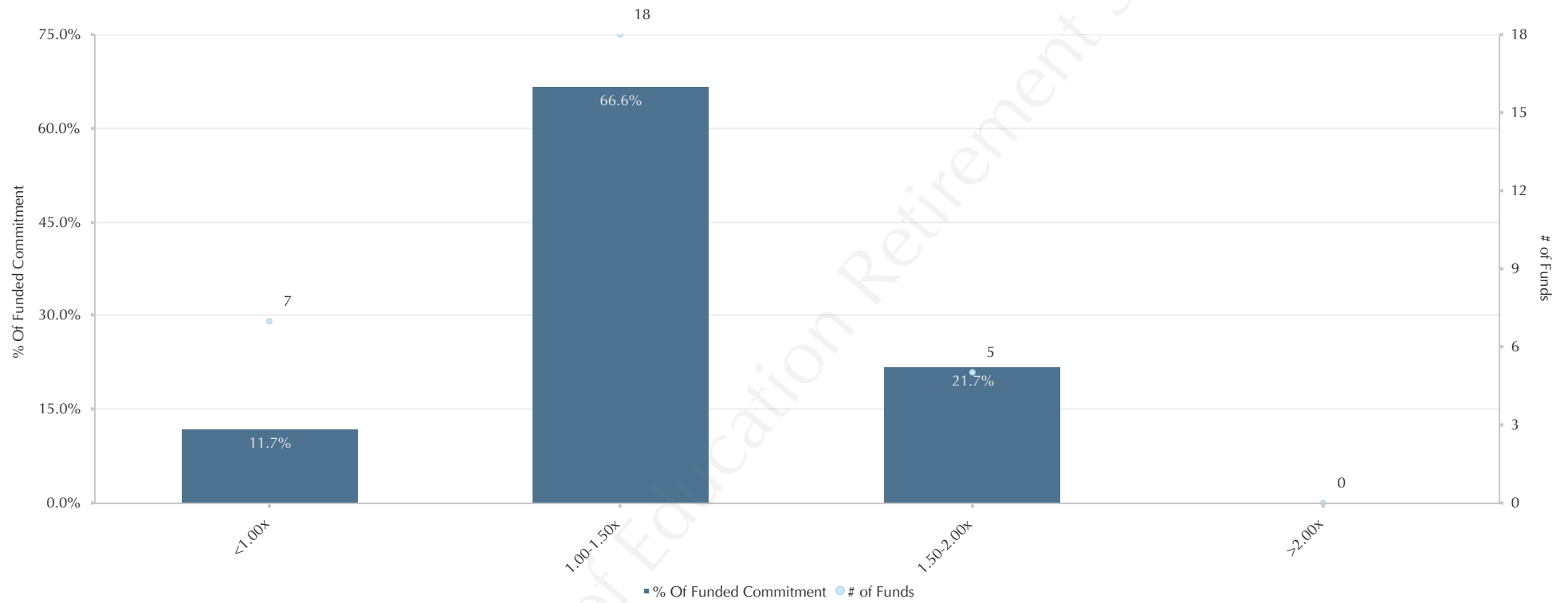
Weighted Average Age (WAA) is based on contributions
WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Performance Statistics

As Of Sep-2022	Sep-2021	Dec-2021	Mar-2022	Jun-2022	Sep-2022	% Change (YTD)	% Change (Quarter)	% Change (Annual)	Sep-2022 Active	Sep-2022 Liquidated
Committed Capital	379.8	419.8	457.6	482.6	527.6	25.7%	9.3%	38.9%	527.6	-
Unfunded Commitment	211.7	234.7	247.1	257.7	284.1	21.1%	10.2%	34.2%	284.1	-
Net Contributed Capital	168.3	185.0	210.1	222.1	238.1	28.7%	7.2%	41.5%	238.1	-
Net Distributed Capital	54.7	67.0	73.1	89.2	95.1	42.0%	6.6%	73.9%	95.1	-
Recallable Capital	17.7	19.4	19.5	19.6	21.3	9.9%	8.8%	20.5%	21.3	-
Net Asset Value	185.1	200.9	227.1	224.1	234.5	16.7%	4.7%	26.7%	234.5	-
Net Gain/Loss	68.7	79.4	85.7	86.8	86.9	9.5%	0.1%	26.5%	86.9	-
Total Value	239.9	267.9	300.2	313.3	329.7	23.0%	5.2%	37.5%	329.7	-
Unfunded + NAV (mm)	396.8	435.7	474.2	481.8	518.7	19.1%	7.6%	30.7%	518.7	-
DPI	0.4x	0.4x	0.4x	0.4x	0.4x	0.0x	0.0x	0.1x	0.4x	-
Total Value to Paid-In (TVPI)	1.4x	1.4x	1.4x	1.4x	1.3x	-0.1x	0.0x	0.0x	1.3x	-
Net Internal Rate of Return (IRR)	12.8%	13.4%	13.4%	12.7%	12.0%	-1.4%	-0.7%	-0.8%	12.0%	-

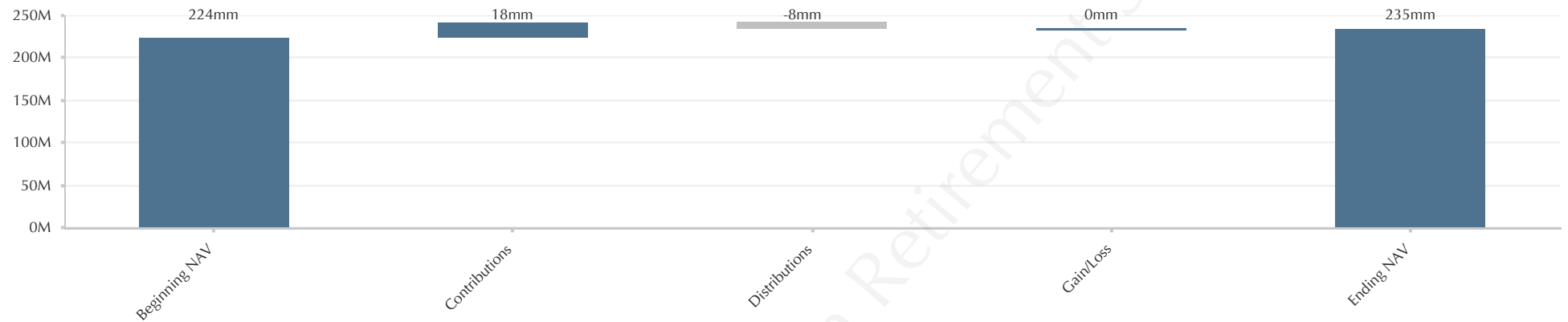
TVPI Distribution

TVPI Distribution

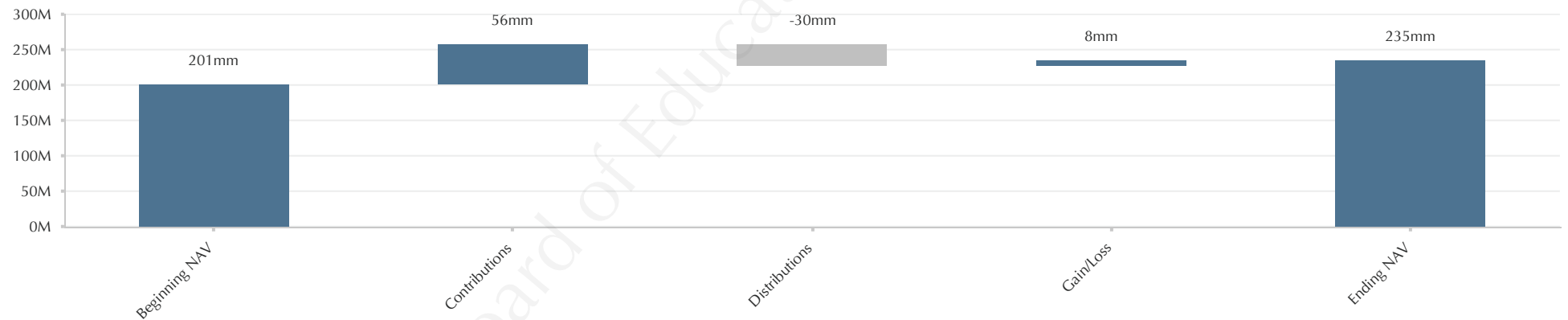


Capital Account Change

Quarterly Valuation Bridge (Jul-2022 to Sep-2022)

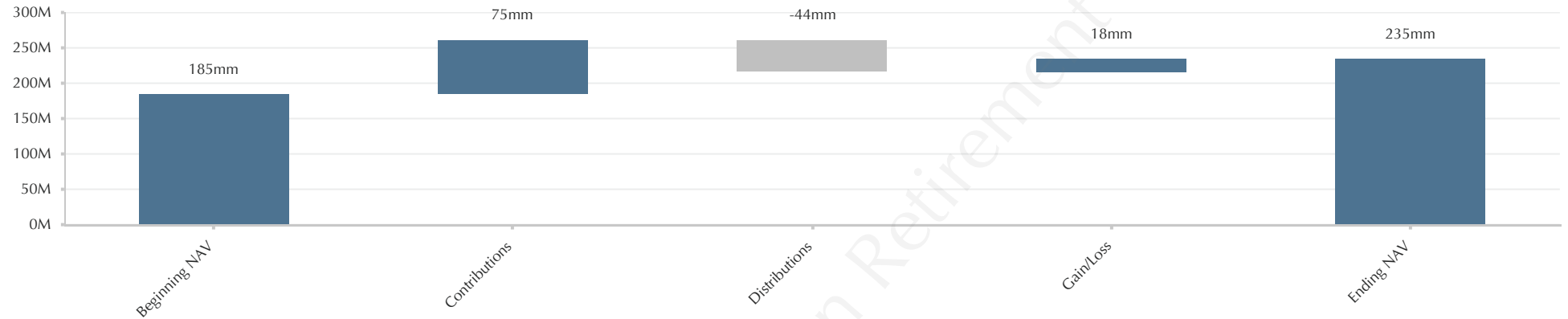


YTD Valuation Bridge (Jan-2022 to Sep-2022)

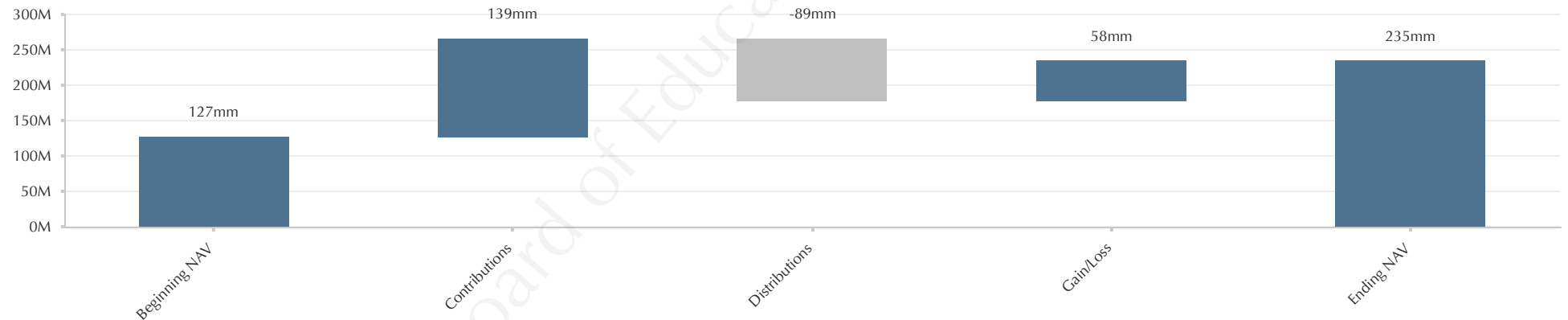


Capital Account Change

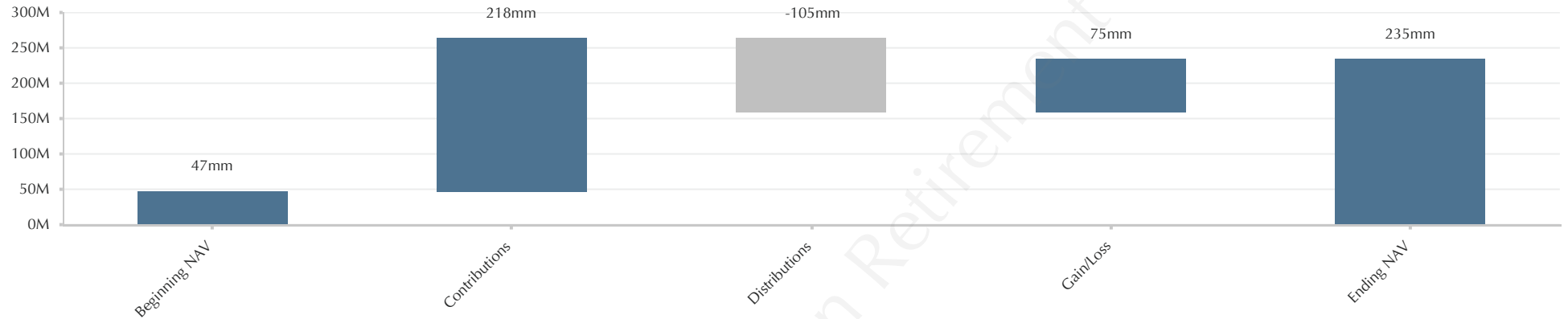
Last 12 Months Valuation Bridge (Oct-2021 to Sep-2022)



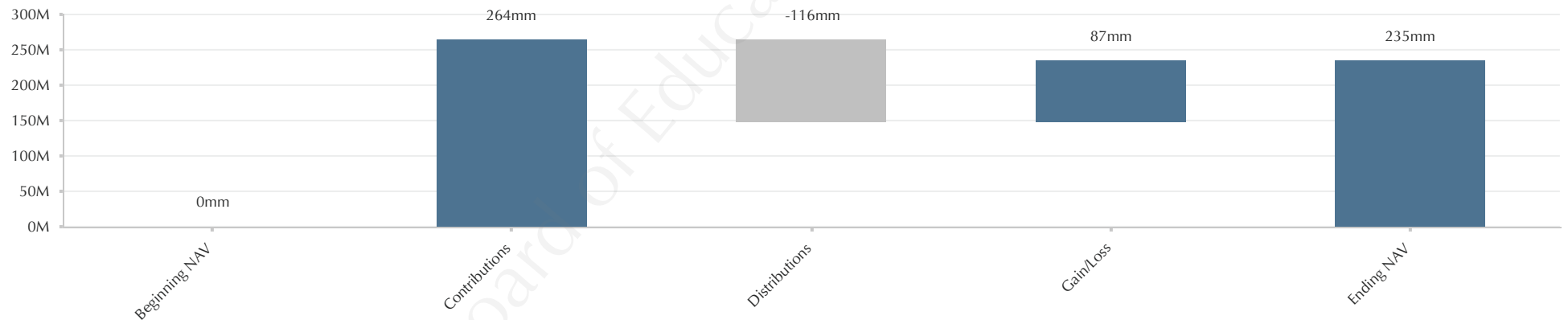
Last 3 Years Valuation Bridge (Oct-2019 to Sep-2022)



Last 5 Years Valuation Bridge (Oct-2017 to Sep-2022)



LTD Valuation Bridge (Jul-2013 to Sep-2022)



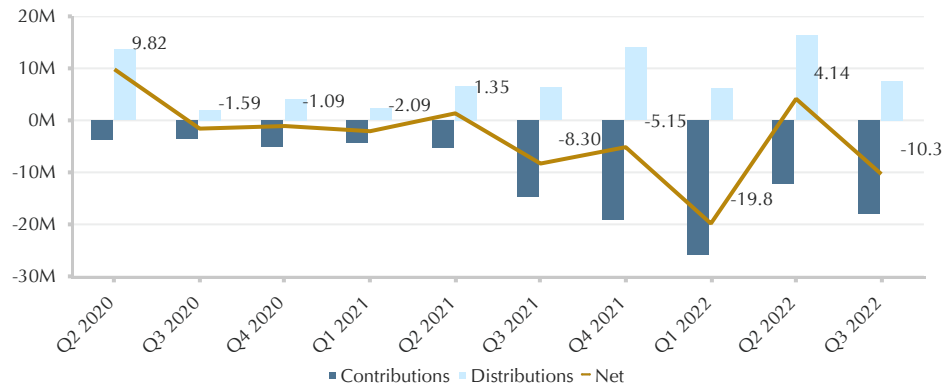
	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Strategy										
Energy	4.2%	52.3	18.1	12.4	37.6	47.4	4.23	9.84	9.8%	1.2x
Infrastructure	95.8%	475.3	246.0	104.0	246.6	471.3	82.7	224.7	12.1%	1.3x
NYCBERS - INFRA	100.0%	527.6	264.1	116.5	284.1	518.7	86.9	234.5	12.0%	1.3x
SubStrategy										
Core	81.8%	429.2	209.7	88.9	232.5	424.4	71.2	191.9	11.8%	1.3x
Non-Core	18.2%	98.4	54.4	27.6	51.7	94.3	15.8	42.6	13.3%	1.3x
NYCBERS - INFRA	100.0%	527.6	264.1	116.5	284.1	518.7	86.9	234.5	12.0%	1.3x

NYCBERS - INFRA

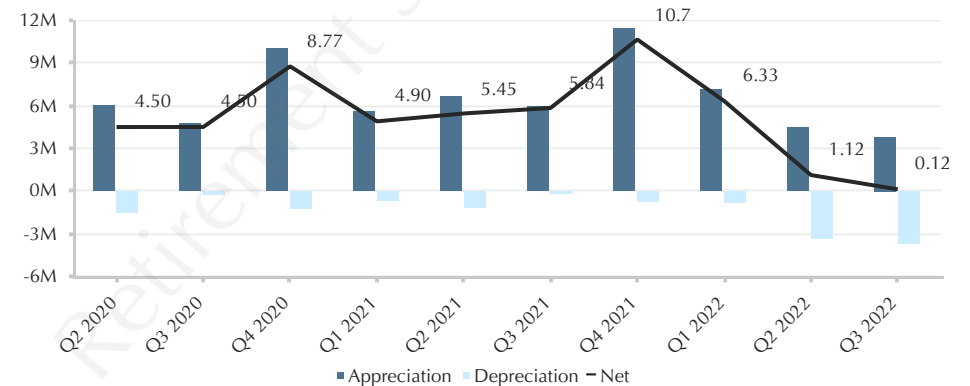
Portfolio Summary

Vintage	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
2023	-0.1%	70.0	0.0	0.0	70.0	69.8	-0.15	-0.15	n.m.	0.0x
2021	12.2%	150.8	29.8	0.34	117.0	145.5	-0.95	28.5	n.m. ¹	1.0x
2020	6.8%	60.6	18.4	1.44	43.2	59.2	-0.97	16.0	-5.7%	0.9x
2019	16.4%	51.3	36.2	4.82	15.5	54.0	7.14	38.5	12.0%	1.2x
2018	19.2%	58.1	45.8	6.94	16.3	61.3	6.11	45.0	7.9%	1.1x
2017	9.4%	33.2	30.0	21.5	6.05	28.1	13.5	22.1	13.3%	1.4x
2016	14.8%	44.6	36.6	18.5	13.1	47.8	16.5	34.7	12.3%	1.5x
2014	17.7%	49.0	57.1	52.8	1.16	42.7	37.1	41.5	13.6%	1.7x
2013	3.6%	10.0	10.1	10.2	1.77	10.2	8.57	8.43	13.0%	1.9x
NYCBERS - INFRA	100.0%	527.6	264.1	116.5	284.1	518.7	86.9	234.5	12.0%	1.3x
Structure										
Co-Investment	3.2%	8.42	5.52	0.93	2.94	10.4	2.88	7.46	15.3%	1.5x
Primary Fund	96.8%	519.2	258.6	115.5	281.2	508.3	84.1	227.1	11.9%	1.3x
NYCBERS - INFRA	100.0%	527.6	264.1	116.5	284.1	518.7	86.9	234.5	12.0%	1.3x
Region										
Global	18.8%	208.8	58.3	37.3	158.6	202.7	23.0	44.1	13.1%	1.4x
North America	15.6%	65.8	36.5	8.16	30.5	67.1	8.29	36.6	9.8%	1.2x
OECD	64.5%	215.1	166.1	71.0	64.6	215.9	56.3	151.3	12.1%	1.3x
Various Europe	1.1%	37.8	3.16	0.0	30.5	33.0	-0.66	2.50	n.m. ¹	0.8x
NYCBERS - INFRA	100.0%	527.6	264.1	116.5	284.1	518.7	86.9	234.5	12.0%	1.3x

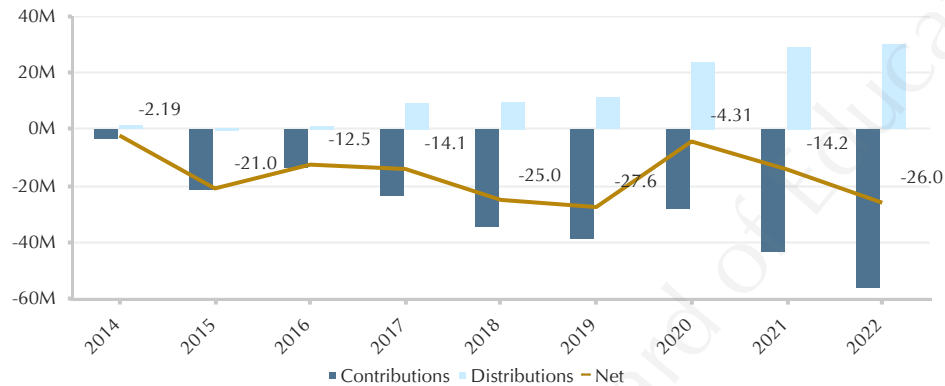
Cash Flows Quarterly



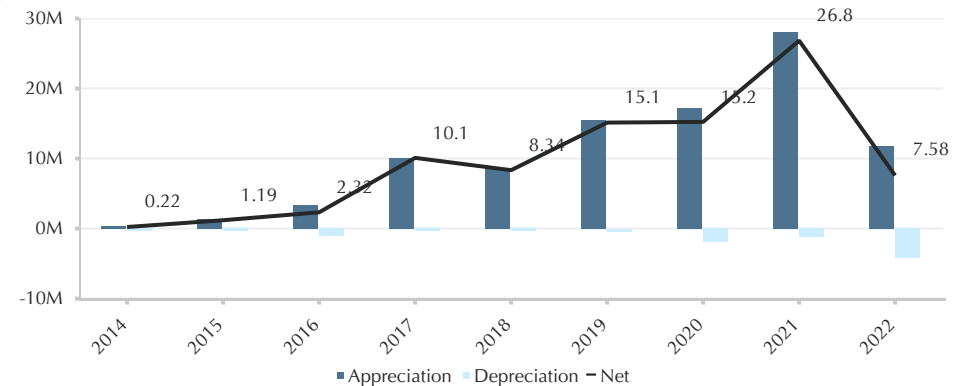
Appreciation/Depreciation Quarterly



Cash Flows Yearly



Appreciation/Depreciation Yearly



Movement By Strategy - QTD

	Gain		Loss		Net Gain/Loss		Distributions		Contributions		NAV (mm)
	Total Millions	# Of Funds	Total Millions	# Of Funds	Net Millions	% Of Total Net	Total Millions	%	Total Millions	%	
Energy	0.39	2	-0.50	1	-0.11	-90.9%	2.78	36.4%	1.09	6.1%	9.84
Infrastructure	3.41	14	-3.18	11	0.23	190.9%	4.86	63.6%	16.9	93.9%	224.7
Total	3.80	16	-3.68	12	0.12	100.0%	7.64	100.0%	18.0	100.0%	234.5

Above reporting references both active and closed funds

Reporting Period: Jul-2022 - Sep-2022

[View this portfolio online](#)

Gain

	Strategy	Vintage Year	Region	Appreciation (mm)
EQT Infrastructure V	Infrastructure	2020	Global	1.13
KKR Global Infrastructure Investors II	Infrastructure	2014	OECD	0.63
Global Energy & Power Infrastructure Fund III F	Infrastructure	2019	OECD	0.51
Global Infrastructure Partners IV	Infrastructure	2018	OECD	0.34
Actis Energy 4	Energy	2016	Global	0.32
Total				2.93

Loss

	Strategy	Vintage Year	Region	Depreciation (mm)
KKR Global Infrastructure Investors IV	Infrastructure	2021	OECD	-0.90
EQT Infrastructure IV - USD Fund	Infrastructure	2018	OECD	-0.71
IFM Global Infrastructure Fund	Infrastructure	2014	OECD	-0.62
Actis Energy 5	Energy	2020	Global	-0.50
Axiom Infrastructure Canada II (Intl)	Infrastructure	2017	North America	-0.33
Total				-3.06

Contributions

	Strategy	Vintage Year	Region	Contributions (mm)
ASF VIII Infrastructure B	Infrastructure	2021	Global	3.25
KKR Global Infrastructure Investors IV	Infrastructure	2021	OECD	3.14
Global Infrastructure Partners IV	Infrastructure	2018	OECD	2.64
Global Energy & Power Infrastructure Fund III F	Infrastructure	2019	OECD	2.30
Stonepeak Infrastructure Fund IV	Infrastructure	2021	North America	1.26
Total				12.6

Distributions

	Strategy	Vintage Year	Region	Distributions (mm)
Actis Energy 4	Energy	2016	Global	2.65
KKR Global Infrastructure Investors II	Infrastructure	2014	OECD	1.14
EQT Infrastructure V	Infrastructure	2020	Global	1.07
KKR Global Infrastructure Investors III	Infrastructure	2018	OECD	0.65
Global Infrastructure Partners III	Infrastructure	2016	OECD	0.46
Total				5.96

Above reporting references both active and closed funds
Each category displays maximum 5 positions

Movement By Strategy - LTM

	Gain		Loss		Net Gain/Loss		Distributions		Contributions		NAV (mm)
	Total Millions	# Of Funds	Total Millions	# Of Funds	Net Millions	% Of Total Net	Total Millions	%	Total Millions	%	
Energy	2.24	2	-1.42	1	0.82	4.5%	6.95	15.8%	4.45	5.9%	9.84
Infrastructure	19.9	20	-2.44	5	17.4	95.5%	37.1	84.2%	70.8	94.1%	224.7
Total	22.1	22	-3.86	6	18.2	100.0%	44.1	100.0%	75.2	100.0%	234.5

Above reporting references both active and closed funds

Reporting Period: Oct-2021 - Sep-2022

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Gain

	Strategy	Vintage Year	Region	Appreciation (mm)
Global Infrastructure Partners III	Infrastructure	2016	OECD	2.40
EQT Infrastructure III	Infrastructure	2017	Global	2.28
Actis Energy 4	Energy	2016	Global	2.02
Brookfield Infrastructure Fund IV	Infrastructure	2019	OECD	1.82
Global Infrastructure Partners IV	Infrastructure	2018	OECD	1.58
Total				10.1

Loss

	Strategy	Vintage Year	Region	Depreciation (mm)
Actis Energy 5	Energy	2020	Global	-1.42
KKR Global Infrastructure Investors IV	Infrastructure	2021	OECD	-1.42
InfraVia European Fund V	Infrastructure	2021	Various Europe	-0.66
Global Energy & Power Infrastructure Fund II	Infrastructure	2014	OECD	-0.15
Brookfield Infrastructure Fund V-B	Infrastructure	2023	Global	-0.15
Total				-3.81

Contributions

	Strategy	Vintage Year	Region	Contributions (mm)
Stonepeak Infrastructure Fund IV	Infrastructure	2021	North America	10.0
Global Infrastructure Partners IV	Infrastructure	2018	OECD	9.70
EQT Infrastructure V	Infrastructure	2020	Global	9.35
KKR Global Infrastructure Investors IV	Infrastructure	2021	OECD	9.14
Ardian Infrastructure Fund V B	Infrastructure	2019	OECD	4.94
Total				43.2

Distributions

	Strategy	Vintage Year	Region	Distributions (mm)
EQT Infrastructure III	Infrastructure	2017	Global	12.9
KKR Global Infrastructure Investors II	Infrastructure	2014	OECD	6.34
Actis Energy 4	Energy	2016	Global	5.39
Global Energy & Power Infrastructure Fund II	Infrastructure	2014	OECD	3.00
KKR Global Infrastructure Investors III	Infrastructure	2018	OECD	2.57
Total				30.2

Above reporting references both active and closed funds
Each category displays maximum 5 positions

Top 5 GP Relationships

	Total Commitments (\$mm)	Unfunded + NAV Commitments (\$mm)	% of Portfolio (Unfunded + NAV)	Contributions (\$mm)	Distributions (\$mm)	Number of Holdings	Net TVPI
Brookfield Asset Management	87.9	92.4	17.8%	36.3	15.9	6	1.5x
Ardian Investments	66.7	67.2	13.0%	20.4	3.45	3	1.2x
EQT Partners AB	60.8	59.5	11.5%	43.4	18.7	4	1.3x
KKR Financial	69.6	57.1	11.0%	43.3	31.0	3	1.3x
BlackRock Inc	55.6	47.2	9.1%	27.5	18.0	3	1.3x
GP Relationships Top(5)	340.6	323.4	62.3%	170.9	87.2	19	1.3x
GP Relationships Remaining(7)	186.9	195.3	37.7%	93.2	29.3	11	1.3x
Total Portfolio (12)	527.6	518.7	100.0%	264.1	116.5	30	1.3x

Top managers by exposure (NAV + Unfunded) and reflective of both current and closed holdings.

Top 5 GP Relationships IRR

	QTD	1Y	3Y	5Y	10Y	ITD
Brookfield Asset Management	0.2%	12.4%	13.7%	12.5%	12.6%	12.6%
Ardian Investments	0.2%	10.8%	13.7%	13.4%	14.4%	14.4%
EQT Partners AB	0.6%	10.4%	14.8%	14.2%	14.2%	14.2%
KKR Financial	0.1%	7.7%	18.2%	13.9%	13.7%	13.7%
BlackRock Inc	3.3%	5.6%	6.9%	5.9%	14.4%	14.4%
GP Relationships Top(5)	0.6%	10.0%	14.0%	12.4%	13.6%	13.6%
GP Relationships Remaining(9)	-0.8%	7.7%	8.6%	10.2%	9.9%	9.9%
Total Portfolio (14)	0.1%	9.1%	11.8%	11.5%	12.0%	12.0%

Above reporting references both active and closed funds

Portfolio IRR vs Benchmarks

PERFORMANCE VERSUS BENCHMARKS

9/30/2022	1 QTR	1 YEAR	3 YEAR	5 YEAR	INCEPTION
Program IRR	0.1%	9.1%	11.8%	11.5%	12.0%
50% Russell 3000 & 50% Barclays U.S. Aggregate PME+	-5.0%	-17.4%	0.4%	2.5%	3.1%
<i>Difference</i>	5.1%	26.4%	11.4%	9.0%	8.9%
CPI +400bps	7.8%	7.8%	7.8%	7.8%	7.8%
<i>Difference</i>	-7.7%	1.3%	4.1%	3.7%	4.2%
CPI +400bps PME+	1.2%	12.6%	9.4%	8.5%	8.1%
<i>Difference</i>	-1.1%	-3.5%	2.5%	3.0%	3.9%

Per BERS' Investment Policy Statement, the performance benchmark for the Infrastructure Portfolio is to meet or exceed the Consumer Price Index ("CPI") plus 4% net of fees over a 5-year rolling period. To be consistent with this definition, the 5Y return is used across all time periods.

	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	Net TVPI	DPI	RVPI	Net IRR
Strategy								
Energy	18.1	12.4	9.84	4.23	1.2x	0.7x	0.5x	9.8%
Infrastructure	246.0	104.0	224.7	82.7	1.3x	0.4x	0.9x	12.1%
SubStrategy								
Non-Core	54.4	27.6	42.6	15.8	1.3x	0.5x	0.8x	13.3%
Core	209.7	88.9	191.9	71.2	1.3x	0.4x	0.9x	11.8%
Vintage								
2023	0.0	0.0	-0.15	-0.15	0.0x	0.0x	0.0x	n.m.
2021	29.8	0.34	28.5	-0.95	1.0x	0.0x	1.0x	n.m. ¹
2020	18.4	1.44	16.0	-0.97	0.9x	0.1x	0.9x	-5.7%
2019	36.2	4.82	38.5	7.14	1.2x	0.1x	1.1x	12.0%
2018	45.8	6.94	45.0	6.11	1.1x	0.2x	1.0x	7.9%
2017	30.0	21.5	22.1	13.5	1.4x	0.7x	0.7x	13.3%
2016	36.6	18.5	34.7	16.5	1.5x	0.5x	0.9x	12.3%
2014	57.1	52.8	41.5	37.1	1.7x	0.9x	0.7x	13.6%
2013	10.1	10.2	8.43	8.57	1.9x	1.0x	0.8x	13.0%

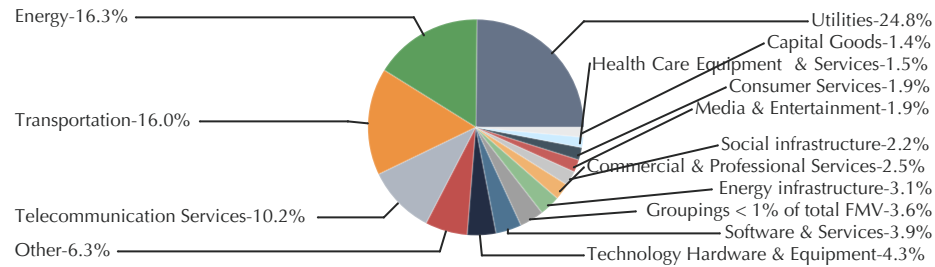
	Contributions (mm)	Distributions (mm)	NAV (mm)	Gain/Loss (mm)	Net TVPI	DPI	RVPI	Net IRR
Structure								
Co-Investment	5.52	0.93	7.46	2.88	1.5x	0.2x	1.4x	15.3%
Primary Fund	258.6	115.5	227.1	84.1	1.3x	0.4x	0.9x	11.9%
Region								
Various Europe	3.16	0.0	2.50	-0.66	0.8x	0.0x	0.8x	n.m. ¹
North America	36.5	8.16	36.6	8.29	1.2x	0.2x	1.0x	9.8%
Global	58.3	37.3	44.1	23.0	1.4x	0.6x	0.8x	13.1%
OECD	166.1	71.0	151.3	56.3	1.3x	0.4x	0.9x	12.1%
NYCBERS - INFRA	264.1	116.5	234.5	86.9	1.3x	0.4x	0.9x	12.0%

¹ IRR not meaningful for investments held less than 24 months

* Total figures take into account all current and closed portfolio positions as at Sep-2022

Portfolio Composition - Industry Group

Industry Group Exposure by FMV



	Total Invested Capital	% of Total	Fair Market Value	% of Total
Utilities	64,511,406	26.4%	62,599,955	24.8%
Energy	44,640,787	18.3%	41,044,279	16.3%
Transportation	33,869,948	13.9%	40,403,296	16.0%
Telecommunication Services	25,195,193	10.3%	25,798,178	10.2%
Other	13,218,428	5.4%	15,942,354	6.3%
Technology Hardware & Equipment	8,415,533	3.4%	10,804,287	4.3%
Software & Services	8,351,600	3.4%	9,727,650	3.9%
Energy infrastructure	7,185,996	2.9%	7,800,661	3.1%
Commercial & Professional Services	5,058,992	2.1%	6,180,860	2.5%
Social infrastructure	5,155,514	2.1%	5,546,993	2.2%
Media & Entertainment	7,480,669	3.1%	4,755,418	1.9%
Consumer Services	4,250,343	1.7%	4,678,698	1.9%
Health Care Equipment & Services	3,901,715	1.6%	3,904,483	1.5%
Capital Goods	3,030,183	1.2%	3,646,735	1.4%
Groupings < 1% of total FMV	9,884,960	4.0%	9,140,419	3.6%

Total Invested Capital represents all investments made since inception and includes any recycled capital.

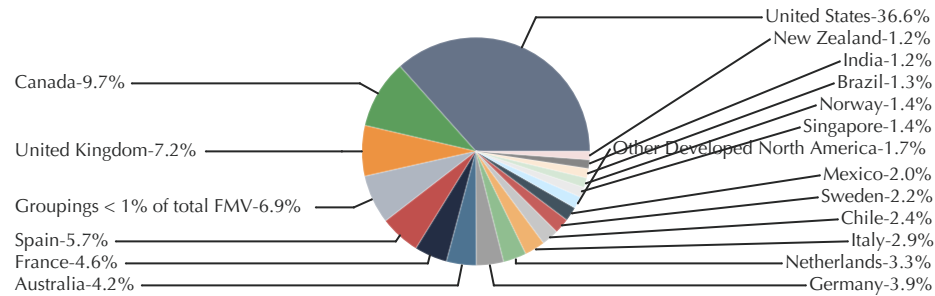
Position Analytics data based on GP provided information as of Sep-2022

Reporting Period: As Of Sep-2022

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Portfolio Composition - Country

Country Exposure by FMV



	Total Invested Capital	% of Total	Fair Market Value	% of Total
United States	89,964,180	36.8%	92,228,374	36.6%
Canada	20,525,358	8.4%	24,561,535	9.7%
United Kingdom	16,672,944	6.8%	18,060,163	7.2%
Spain	15,158,225	6.2%	14,467,260	5.7%
France	11,292,698	4.6%	11,699,182	4.6%
Australia	9,662,226	4.0%	10,633,350	4.2%
Germany	12,563,246	5.1%	9,762,816	3.9%
Netherlands	10,171,415	4.2%	8,290,140	3.3%
Italy	5,450,217	2.2%	7,304,622	2.9%
Chile	3,795,590	1.6%	6,128,009	2.4%
Sweden	3,098,544	1.3%	5,453,238	2.2%
Mexico	8,102,442	3.3%	5,069,594	2.0%
Other Developed North America	3,916,615	1.6%	4,334,534	1.7%
America	2,031,718	0.8%	3,599,754	1.4%
Singapore	3,470,132	1.4%	3,451,135	1.4%
Norway	5,661,986	2.3%	3,392,448	1.3%
Brazil	4,865,309	2.0%	3,109,316	1.2%
India	2,228,534	0.9%	2,933,006	1.2%
New Zealand				
Groupings < 1% of total FMV	15,519,888	6.4%	17,495,795	6.9%

Total Invested Capital represents all investments made since inception and includes any recycled capital.

Position Analytics data based on GP provided information as of Sep-2022

Portfolio Top 20 Investments by FMV

Investment Name	Investment Date	Holding Period	Country	Region	Sector	Public Company	Total Invested Capital	Distributed Capital	Current Cost	Fair Market Value	TVPI	GICS Sector	GICS Sub-Sector
Sydney Airport Corporation Limited	Mar-2022	0.5	Australia	Asia Australia	Industrials	No	\$5.8mm	\$0.0mm	\$3.9mm	\$6.0mm	1.0x	Transportation	Airport Services
GlobalConnect AB	Jan-2017	4.1	Sweden	Europe	Communication Services	No	\$3.1mm	\$0.1mm	\$3.1mm	\$5.5mm	1.8x	Telecom	None Specified
Genesee & Wyoming, Inc.	Dec-2019	2.8	United States	North America	Industrials	No	\$3.7mm	\$0.4mm	\$3.7mm	\$5.1mm	1.5x	Transportation	Highways and Railtracks
Atlas Renewable Energy Chile SpA	Dec-2016	5.8	Chile	Latin America	Utilities	No	\$2.6mm	\$0.1mm	\$2.5mm	\$4.9mm	1.9x	Renewables	Renewable Electricity
CyrusOne LLC	Mar-2022	0.5	United States	North America	Communication Services	No	\$4.7mm	\$0.0mm	\$4.7mm	\$4.8mm	1.0x	Telecom	Diversified Telecommunication Services
Zayo Group, LLC	Mar-2020	2.5	United States	North America	Information Technology	No	\$3.7mm	\$0.0mm	\$3.7mm	\$4.8mm	1.3x	Telecom	Alternative Carriers
ITR Concession Co. LLC	May-2015	7.1	United States	North America	Industrials	No	\$2.6mm	\$1.9mm	-	\$4.5mm	2.5x	Transportation	Highways and Railtracks
Buckeye Partners, L.P.	Nov-2019	2.7	United States	North America	Energy	No	\$2.7mm	\$-0.1mm	-	\$4.3mm	1.5x	Midstream	Oil and Gas Storage and Transportation
EdgeConneX Inc.	Nov-2020	1.3	United States	North America	Information Technology	No	\$3.1mm	\$0.2mm	\$3.1mm	\$4.3mm	1.4x	Telecom	Internet Services and Infrastructure
Aleatica S.A.	Apr-2015	7.2	Mexico	Latin America	Industrials	Yes	\$3.5mm	\$0.9mm	-	\$4.1mm	1.4x	Transportation	Highways and Railtracks
Naturgy Energy Group S.A.	Sep-2016	3.4	Spain	Europe	Utilities	Yes	\$3.1mm	\$1.2mm	\$1.4mm	\$3.8mm	1.6x	Utilities	Gas Utilities
Robin (ASF VIII Infra)	Sep-2021	1.0	Other Developed North America	North America	Other	No	\$3.2mm	\$0.4mm	-	\$3.6mm	1.2x	Other	None Specified
EnerCare, Inc.	Oct-2018	4.0	Canada	North America	Utilities	No	\$2.5mm	\$0.8mm	\$2.5mm	\$3.6mm	1.8x	Utilities	Specialized Consumer Services
DELTA Fiber Nederland B.V.	Feb-2017	1.3	Netherlands	Europe	Communication Services	No	\$4.1mm	\$2.4mm	\$3.2mm	\$3.2mm	1.4x	Telecom	Internet Services and Infrastructure
Deutsche Glasfaser Holding GmbH	Nov-2015	3.5	Germany	Europe	Communication Services	No	\$5.0mm	\$9.1mm	\$2.5mm	\$3.2mm	2.4x	Telecom	Cable and Satellite
wpd AG	Mar-2022	0.6	Germany	Europe	Energy	No	\$3.1mm	\$0.0mm	\$3.1mm	\$3.1mm	1.0x	Renewables	Renewable Electricity
Atlantic Aviation FBO Holdings LLC	Sep-2021	1.0	United States	North America	Industrials	No	\$2.8mm	\$0.0mm	\$2.8mm	\$3.1mm	1.1x	Transportation	Airport Services
Covanta Holding Corporation	Nov-2021	0.6	United States	North America	Industrials	No	\$2.8mm	\$0.0mm	\$2.8mm	\$3.0mm	1.1x	Other	None Specified

Company headquarters represents location provided by the manager most recently or at initial investment date.
Position Analytics data based on GP provided information as of Sep-2022

Reporting Period: As Of Sep-2022

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Portfolio Top 20 Investments by FMV

Investment Name	Investment Date	Holding Period	Country	Region	Sector	Public Company	Total Invested Capital	Distributed Capital	Current Cost	Fair Market Value	TVPI	GICS Sector	GICS Sub-Sector
Equis Energy Developments Pte Ltd	Jan-2018	4.7	Singapore	Asia Australia	Utilities	No	\$1.4mm	\$0.3mm	\$1.4mm	\$2.9mm	2.2x	Renewables	Renewable Electricity
X-Elío Energy S.L.	Dec-2015	6.2	Spain	Europe	Utilities	No	\$2.9mm	\$1.8mm	\$1.9mm	\$2.9mm	1.6x	Renewables	Internet Services and Infrastructure
Totals	-	2.8	-	-	-	-	\$66.4mm	\$19.4mm	\$46.3mm	\$80.5mm	1.5x	-	-

Company headquarters represents location provided by the manager most recently or at initial investment date.
Position Analytics data based on GP provided information as of Sep-2022

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NYC BERS Infrastructure Portfolio as of Q3 2022									
Vintage Year	Investment	Closing Date	Committed Capital	Contributed Capital	Distributed Capital	Unfunded Commitment	Market Value	TVPI	IRR
Active Investments:									
2016	Actis Energy 4	12/16/2016	\$ 10,600,000	\$ 9,720,122	\$ 8,834,468	\$ 3,615,343	\$ 5,587,000	1.48	14.73%
2020	Actis Energy 5	6/30/2020	\$ 27,000,000	\$ 1,258,152	\$ -	\$ 25,741,848	\$ (164,000)	-0.13	n.m.
2019	Aradian Infrastructure Fund V B	3/4/2019	\$ 14,737,491	\$ 7,587,460	\$ 332,295	\$ 6,039,992	\$ 7,731,351	1.06	5.59%
2016	ASF VII Infrastructure	4/24/2017	\$ 12,000,000	\$ 8,144,734	\$ 3,079,518	\$ 4,072,541	\$ 9,094,748	1.49	17.24%
2021	ASF VIII Infrastructure B	11/1/2021	\$ 40,000,000	\$ 4,701,451	\$ 41,030	\$ 35,320,694	\$ 4,941,028	1.06	n.m.
2017	Axiom Infrastructure North America	8/14/2017	\$ 12,221,338	\$ 12,718,850	\$ 3,547,068	\$ -	\$ 13,239,700	1.32	8.52%
2023	BlackRock Global Infrastructure Fund IV D	6/30/2022	\$ 25,000,000	\$ -	\$ -	\$ 25,000,000	\$ -	0.00	n.m.
2013	Brookfield Infrastructure Fund II	7/8/2013	\$ 10,000,000	\$ 10,068,051	\$ 10,204,892	\$ 1,769,027	\$ 8,433,932	1.85	13.01%
2016	Brookfield Infrastructure Fund III	4/15/2016	\$ 10,000,000	\$ 6,790,773	\$ 2,536,477	\$ 3,902,384	\$ 6,825,597	1.38	9.64%
2019	Brookfield Infrastructure Fund IV	5/10/2019	\$ 19,000,000	\$ 15,492,997	\$ 2,365,266	\$ 4,241,445	\$ 16,945,100	1.25	13.07%
2019	Brookfield Infrastructure Fund IV (BIF IV): Co-Invest	10/22/2019	\$ 2,000,000	\$ 2,008,481	\$ 212,225	\$ -	\$ 2,749,903	1.47	15.42%
2023	Brookfield Infrastructure Fund V-B	7/18/2022	\$ 45,000,000	\$ -	\$ -	\$ 45,000,000	\$ (152,668)	0.00	n.m.
2018	Cardinal NR Sidecar Holdings	10/11/2018	\$ 1,880,001	\$ 1,892,698	\$ 625,014	\$ 1	\$ 2,733,842	1.77	17.50%
2017	EQT Infrastructure III	2/21/2017	\$ 9,214,756	\$ 10,254,185	\$ 14,349,377	\$ 774,981	\$ 4,406,173	1.83	20.64%
2018	EQT Infrastructure IV - USD Fund	12/20/2018	\$ 18,000,000	\$ 16,021,678	\$ 2,960,272	\$ 4,062,361	\$ 16,593,680	1.22	10.45%
2020	EQT Infrastructure IV Co-Investment (Saber)	3/1/2020	\$ 1,600,000	\$ 1,616,000	\$ 97,112	\$ -	\$ 1,977,355	1.28	10.54%
2020	EQT Infrastructure V	10/29/2020	\$ 32,000,000	\$ 15,546,768	\$ 1,339,141	\$ 17,470,427	\$ 14,204,919	1.00	n.m.
2014	Global Energy & Power Infrastructure Fund II	4/16/2014	\$ 15,000,000	\$ 16,389,949	\$ 16,121,734	\$ 360,877	\$ 5,517,728	1.32	15.22%
2019	Global Energy & Power Infrastructure Fund III F	7/3/2018	\$ 15,600,000	\$ 11,078,643	\$ 1,906,445	\$ 5,216,269	\$ 11,063,465	1.17	11.93%
2016	Global Infrastructure Partners III	1/29/2016	\$ 12,000,000	\$ 11,939,941	\$ 4,005,700	\$ 1,541,498	\$ 13,150,200	1.44	10.22%
2018	Global Infrastructure Partners IV	3/11/2019	\$ 22,600,000	\$ 14,442,039	\$ 10,727	\$ 9,149,572	\$ 15,190,867	1.05	6.15%
2014	IFM Global Infrastructure Fund	1/2/2014	\$ 15,000,000	\$ 20,027,335	\$ 9,073,785	\$ -	\$ 26,854,760	1.79	10.97%
2021	InfraVia European Fund V	3/1/2022	\$ 37,825,000	\$ 3,164,008	\$ -	\$ 30,507,353	\$ 2,502,162	0.79	n.m.
2014	KKR Global Infrastructure Investors II	6/12/2015	\$ 19,000,000	\$ 20,702,336	\$ 27,573,146	\$ 803,500	\$ 9,121,484	1.77	17.53%
2018	KKR Global Infrastructure Investors III	3/29/2018	\$ 15,600,000	\$ 13,482,548	\$ 3,342,055	\$ 3,082,578	\$ 10,494,161	1.03	1.52%
2021	KKR Global Infrastructure Investors IV	5/24/2021	\$ 35,000,000	\$ 9,136,808	\$ 125,464	\$ 25,992,739	\$ 7,593,537	0.84	n.m.
2017	NYCRS EIG Energy Partners	8/14/2017	\$ 11,760,000	\$ 7,072,311	\$ 3,607,913	\$ 5,276,333	\$ 4,415,147	1.13	7.41%
2021	NYCRS EIG Energy Partners Co-Investment	1/12/2018	\$ 2,940,000	\$ -	\$ -	\$ 2,940,000	\$ -	0.00	n.m.
2021	Stonepeak Infrastructure Fund IV	2/16/2021	\$ 35,000,000	\$ 12,817,756	\$ 171,207	\$ 22,256,670	\$ 13,494,519	1.07	n.m.
Total			\$ 527,578,586	\$ 264,076,074	\$ 116,462,331	\$ 284,138,433	\$ 234,545,689	1.33	11.99%

Risk Quarterly Report (Public):

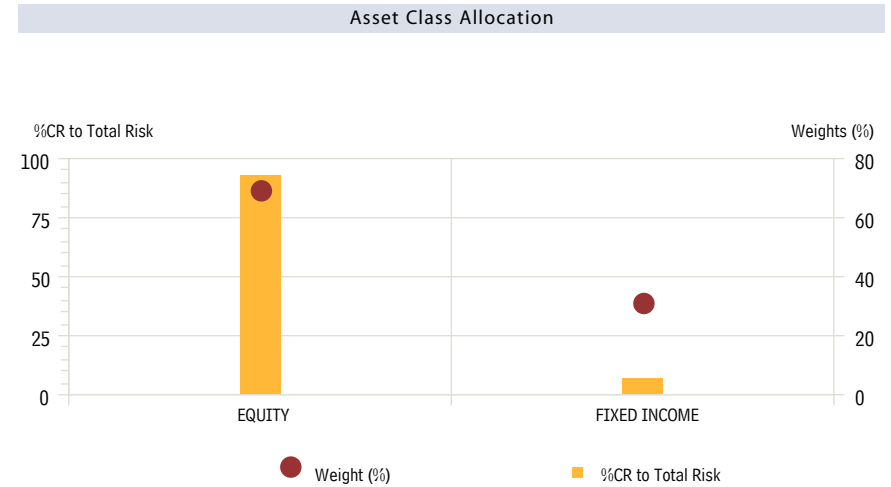
BarraOne Total Plan Summary

COMPANY: NYCRS - BERS
PORTFOLIO: BERS_Total Plan
BENCHMARK: BERS_Policy
POSITIONS: 8,463

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 7,904,548,456
ACCEPTED: 8,371

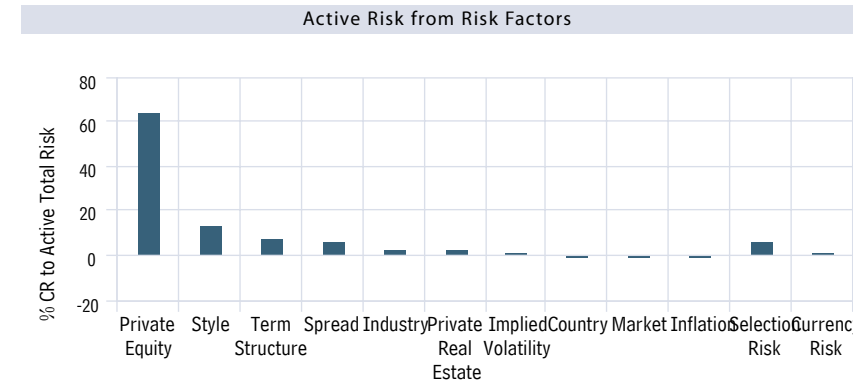
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk				
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution
Total Risk	14.13	Total	7,904,548,456	100.00	14.13	14.13
Benchmark Risk	13.06	EQUITY	5,466,113,110	69.15	19.14	13.18
Active Risk	2.77	FIXED INCOME	2,438,435,346	30.85	5.06	0.95
Portfolio Beta	1.06					
Effective Duration	1.59					



Risk Factor Breakdown

Risk Decomposition						
Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	14.13	100.00	1.00	2.77	100.00	1.00
Local Market Risk	13.49	95.45	1.00	2.74	99.04	1.00
Common Factor Risk	13.44	95.12	1.00	2.57	92.72	0.97
Private Real Estate	0.83	5.84	0.73	0.05	1.87	0.27
Implied Volatility	0.02	0.15	0.42	0.00	0.06	0.08
Industry	0.10	0.73	0.21	0.07	2.44	0.23
Inflation	0.08	0.58	0.44	-0.03	-1.02	-0.25
Market	10.74	75.97	0.97	-0.02	-0.81	-0.09
Private Equity	0.34	2.44	0.16	1.76	63.68	0.80
Spread	0.66	4.68	0.73	0.15	5.54	0.39
Style	0.55	3.87	0.73	0.37	13.48	0.45
Term Structure	0.12	0.87	0.08	0.21	7.50	0.30
Selection Risk	0.05	0.34	0.06	0.17	6.33	0.25
Currency Risk	0.64	4.55	0.56	0.03	0.96	0.19



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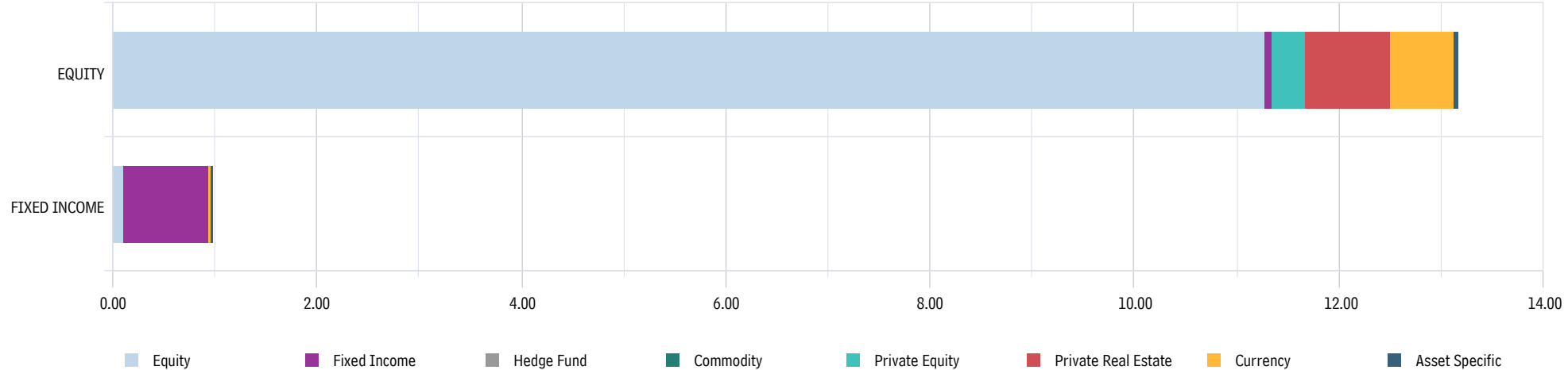
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Risk Contribution Breakdown by Risk Type

Asset Name	Mkt Value	Weight (%)	Eff Weight (%)	Total Risk	%CR to Total Risk	Port Risk Contribution	Risk Contribution							
							Equity	Fixed Income	Hedge Fund	Commodity	Private Real Estate	Private Equity	Currency	Asset Specific
Total	7,904,548,456	100.00	-	14.13	100.00	14.13	11.39	0.89	0.00	0.00	0.83	0.34	0.64	0.05
EQUITY	5,466,113,110	69.15	-	19.14	93.25	13.18	11.29	0.06	0.00	0.00	0.83	0.33	0.63	0.05
FIXED INCOME	2,438,435,346	30.85	-	5.06	6.75	0.95	0.10	0.83	0.00	0.00	0.00	0.01	0.01	0.00



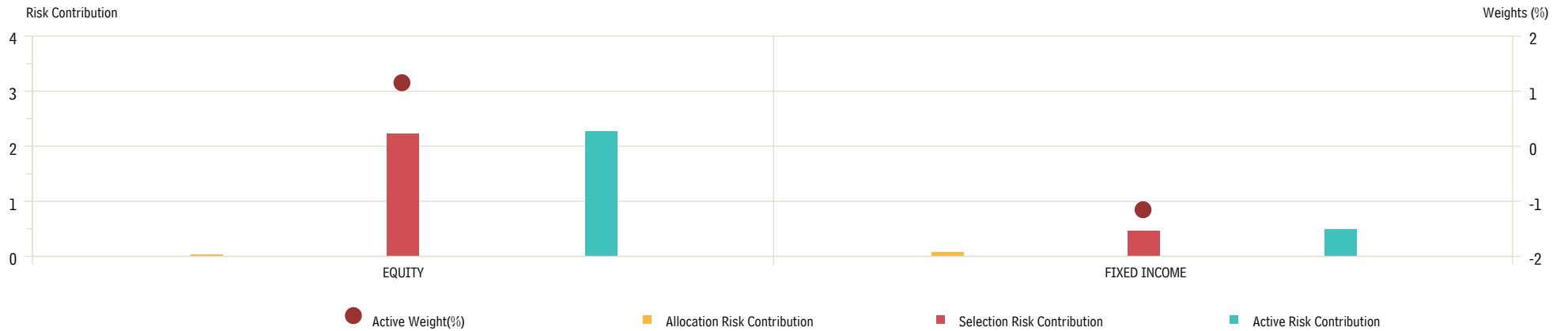
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Allocation Selection

Asset Class	Active Weight(%)	Allocation			Selection			Active
		Volatility	Correlation	Risk Contribution	Volatility	Correlation	Risk Contribution	Risk Contribution
Active Total Risk				0.09			2.68	2.77
EQUITY	1.15	5.68	0.42	0.03	3.47	0.93	2.23	2.26
FIXED INCOME	-1.15	12.08	-0.42	0.06	2.93	0.50	0.45	0.51



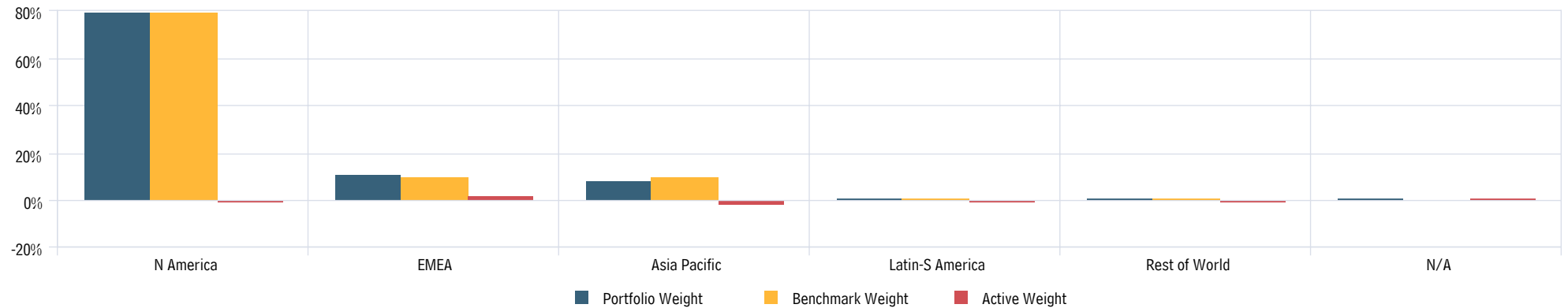
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Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	0.00	14.13	2.77	100.00	0.03
N America	79.57	79.77	-0.20	13.70	2.50	90.19	0.01
EMEA	11.11	9.39	1.73	20.42	0.26	9.33	0.03
Asia Pacific	8.26	9.88	-1.62	17.92	0.01	0.41	0.00
Latin-S America	0.56	0.63	-0.07	26.16	-0.01	-0.21	0.03
Rest of World	0.33	0.33	-0.00	11.21	0.00	0.14	-0.01
N/A	0.17	0.00	0.17	18.70	0.00	0.13	0.02



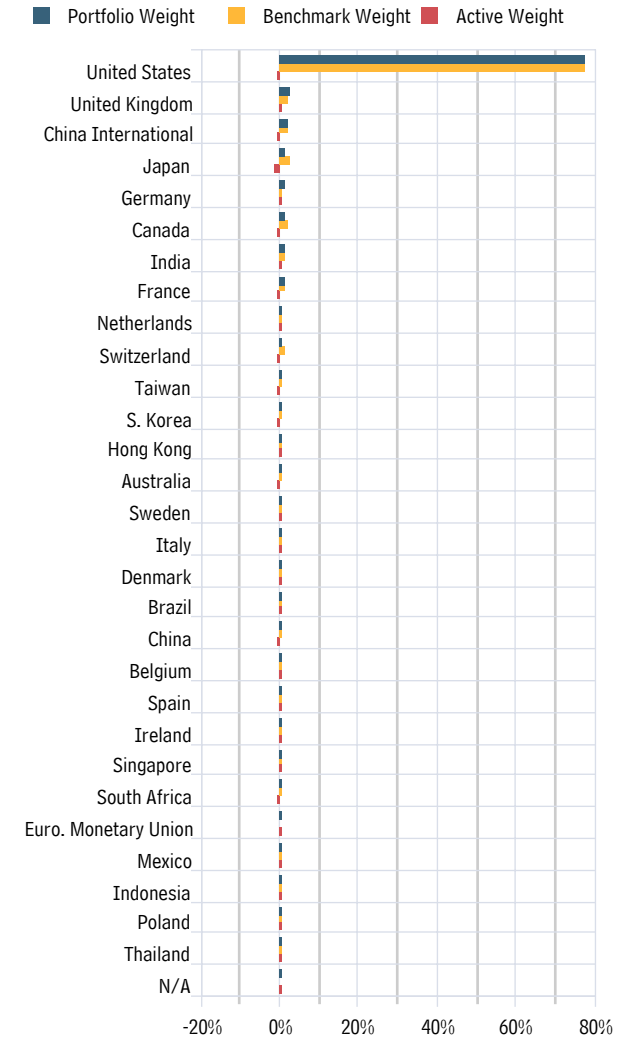
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Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	0.00	14.13	2.77	100.00	0.03
United States	77.61	77.71	-0.10	13.67	2.45	88.68	0.01
United Kingdom	2.65	2.11	0.54	21.38	0.09	3.33	0.03
China International	1.93	1.98	-0.05	28.18	-0.01	-0.34	-0.00
Japan	1.63	2.73	-1.10	18.01	0.01	0.49	-0.00
Germany	1.54	1.01	0.52	23.29	0.04	1.34	0.05
Canada	1.24	1.84	-0.60	14.82	0.01	0.45	0.02
India	1.14	1.05	0.09	22.82	0.01	0.21	0.02
France	1.04	1.48	-0.44	19.22	-0.02	-0.57	0.03
Netherlands	1.01	0.62	0.40	26.63	0.03	1.10	0.05
Switzerland	0.90	1.25	-0.35	17.79	0.01	0.49	0.01
Taiwan	0.81	1.01	-0.20	27.35	0.00	0.05	0.01
S. Korea	0.70	0.83	-0.13	25.20	-0.00	-0.11	0.02
Hong Kong	0.63	0.40	0.23	25.39	0.00	0.09	-0.01
Australia	0.62	1.00	-0.38	23.19	-0.00	-0.15	0.03
Sweden	0.61	0.41	0.21	30.91	0.03	0.96	0.07
Italy	0.58	0.33	0.25	22.37	0.01	0.51	0.04
Denmark	0.50	0.36	0.15	27.32	0.02	0.90	0.04
Brazil	0.48	0.39	0.09	34.80	0.00	0.14	0.05
China	0.37	0.39	-0.02	29.82	0.01	0.24	-0.02
Belgium	0.36	0.16	0.19	21.46	0.01	0.26	0.02
Spain	0.35	0.32	0.03	14.68	-0.00	-0.11	0.02
Ireland	0.33	0.17	0.16	14.47	0.00	0.01	0.02
Singapore	0.30	0.17	0.13	17.45	0.00	0.02	0.01
South Africa	0.25	0.27	-0.02	28.91	-0.00	-0.06	0.04
Euro. Monetary Union	0.23	0.00	0.23	32.70	0.02	0.65	0.04
Mexico	0.21	0.18	0.02	21.55	-0.00	-0.03	0.02
Indonesia	0.20	0.14	0.06	24.05	0.00	0.05	0.01
Poland	0.18	0.05	0.13	29.47	0.01	0.27	0.06
Thailand	0.18	0.17	0.01	25.25	0.00	0.05	0.02
N/A	0.17	0.00	0.17	18.70	0.00	0.13	0.02



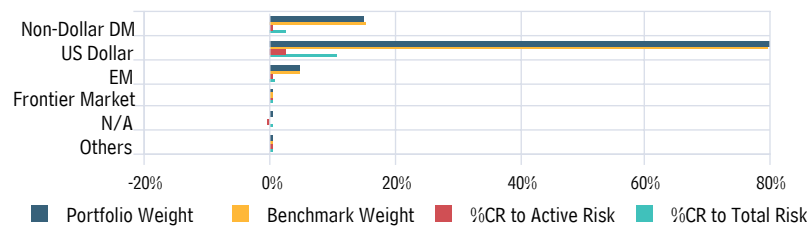
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Portfolio Allocation by Currency

Exposure by Market



Developed Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	6,316,501,502.32	88.90	74.99
Euro	410,558,648.44	3.78	7.30
British Pound Sterling	184,079,149.98	3.54	3.33
Hong Kong Dollar	176,132,067.80	0.01	2.14
Japanese Yen	128,919,501.09	0.32	1.49

Emerging Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
Indian Rupee	89,969,094.90	0.21	1.12
New Taiwan Dollar	64,134,284.05	0.05	0.99
Korean Won	49,160,471.21	-0.16	0.84
Brazilian Real	37,402,242.59	0.13	0.62
Chinese Yuan	28,683,341.10	0.23	0.37

Top 15 Currencies by Weight%

Weight (%)

Currency of Exposure	Portfolio	Benchmark	Active	Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
Total	100.00	100.00	0.00	14.13	14.13	100.00	2.77	100.00
US Dollar	79.91	79.47	0.44	13.43	10.60	74.99	2.46	88.90
Euro	5.19	3.87	1.33	22.57	1.03	7.30	0.10	3.78
British Pound Sterling	2.33	1.83	0.50	24.17	0.47	3.33	0.10	3.54
Hong Kong Dollar	2.23	2.23	0.00	29.97	0.30	2.14	0.00	0.01
Japanese Yen	1.63	2.63	-1.00	18.04	0.21	1.49	0.01	0.32
Indian Rupee	1.14	1.05	0.09	22.83	0.16	1.12	0.01	0.21
Swiss Franc	0.85	1.22	-0.37	18.77	0.13	0.95	0.01	0.51
New Taiwan Dollar	0.81	1.01	-0.19	27.35	0.14	0.99	0.00	0.05
Canadian Dollar	0.76	1.44	-0.69	22.57	0.15	1.08	0.02	0.57
Korean Won	0.62	0.83	-0.20	25.38	0.12	0.84	-0.00	-0.16
Australian Dollar	0.55	0.95	-0.40	25.96	0.12	0.87	-0.00	-0.13
Danish Krone	0.50	0.36	0.15	27.32	0.11	0.77	0.02	0.90
Swedish Krona	0.49	0.40	0.09	29.53	0.12	0.86	0.01	0.47
Brazilian Real	0.47	0.38	0.09	34.94	0.09	0.62	0.00	0.13
Chinese Yuan	0.36	0.37	-0.01	30.46	0.05	0.37	0.01	0.23

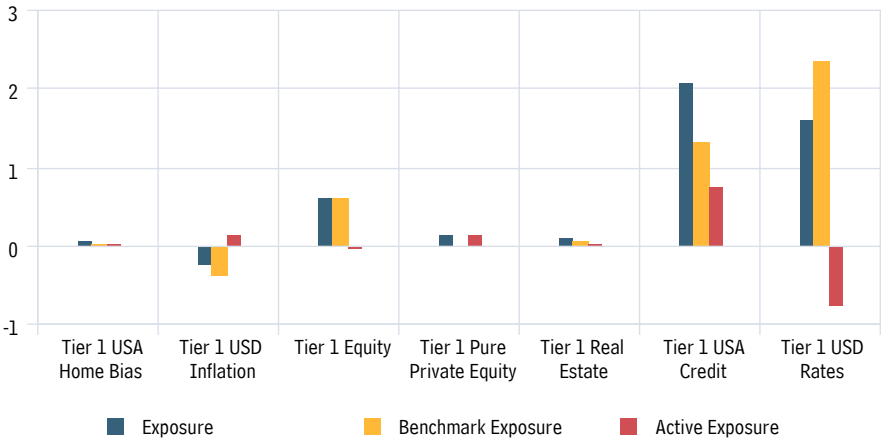
BarraOne Tier 1 USA Factor Summary

Tier 1 factors describe the most important drivers of the markets and provide a platform for the factor-based asset-allocation framework. They provide a lens for strategic asset allocation and are designed for board level reporting.

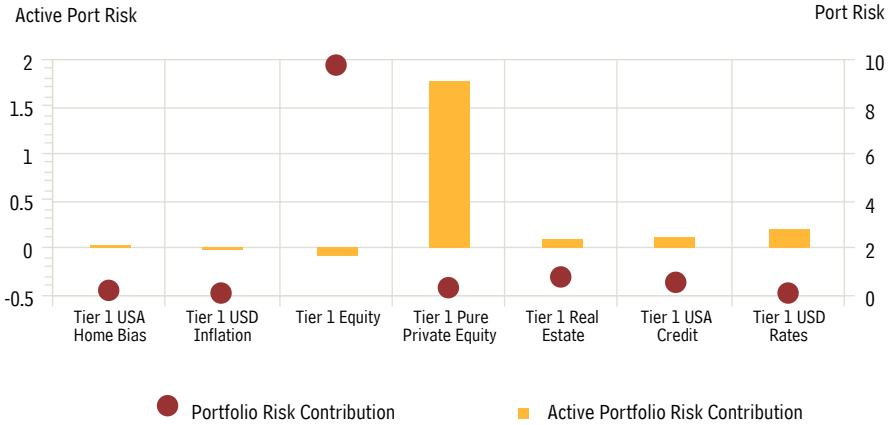
COMPANY: NYCRS - BERS
PORTFOLIO: BERS_Total Plan
BENCHMARK: BERS_Policy
POSITIONS: 8,463
MODEL: MAC.L Tier 1 USA

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
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Macro Factor Exposures



Macro Factor Risk Contribution



BarraOne Tier 1 USA Factor Summary

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Risk Source	Risk Decomposition						
	Exposure			Contribution			
	Exposure	Benchmark Exposure	Active Exposure	Portfolio Risk Contribution	% Portfolio Risk	Active Portfolio Risk Contribution	% Active Risk
Total Risk	-	-	-	14.13	100.00	2.77	100.00
Local Market Risk	-	-	-	13.49	95.45	2.74	99.04
Common Factor Risk	-	-	-	13.44	95.12	2.57	92.72
Country	-	-	-	0.23	1.63	0.03	1.23
Tier 1 USA Home Bias	0.06	0.04	0.02	0.23	1.63	0.03	1.23
Factor Residual Risk	-	-	-	1.55	10.98	0.50	18.21
Inflation	-	-	-	0.07	0.48	-0.02	-0.88
Tier 1 USD Inflation	-0.24	-0.37	0.14	0.07	0.48	-0.02	-0.88
Interaction within Common Factor	-	-	-	N/A	-	N/A	-
Market	-	-	-	9.77	69.10	-0.09	-3.19
Tier 1 Equity	0.60	0.62	-0.01	9.77	69.10	-0.09	-3.19
Private Equity	-	-	-	0.35	2.44	1.76	63.71
Tier 1 Pure Private Equity	0.14	0.00	0.14	0.35	2.44	1.76	63.71
Private Real Estate	-	-	-	0.77	5.44	0.07	2.57
Tier 1 Real Estate	0.09	0.06	0.02	0.77	5.44	0.07	2.57
Spread	-	-	-	0.57	4.03	0.11	3.99
Tier 1 USA Credit	2.08	1.32	0.77	0.57	4.03	0.11	3.99
Term Structure	-	-	-	0.14	1.02	0.20	7.07
Tier 1 USD Rates	1.60	2.35	-0.75	0.14	1.02	0.20	7.07
Specific Risk	-	-	-	0.05	0.34	0.17	6.33
Currency Risk	-	-	-	0.64	4.55	0.03	0.96
Currency/Market Interaction	-	-	-	N/A	-	N/A	-

Tier 1 Macro Factor Scheme has six factors		
Tier 1 Factor	Exposure Type	Description
Equity	Membership (weights)	USA Equity
Pure Private Equity	Membership (weights)	USA Private Equity
Real Estate	Membership (weights)	USA Real Estate
USA Credit	Sensitivities (durations)	Sensitive to USA credit spreads
USD Inflation	Sensitivities (durations)	Sensitive to USD inflation protected assets
USD Rates	Sensitivities (durations)	Sensitive to Govt rate exposure
Commodities	Membership (weights)	Sensitive to Commodities
USA Home Bias	Membership (weights)	USA Home Bias factor returns is very similar to that of a portfolio long the MSCI USA IMI index and short the currency-hedged MSCI ACWI ex-US IMI index.

Factor Residual Risk				
Risk Source	Portfolio Risk Contribution	% Portfolio Risk	Active Portfolio Risk Contribution	% Active Risk
Basis	-0.00	-0.00	0.00	0.00
Country	-0.00	-0.01	-0.00	-0.02
Implied Volatility	0.02	0.15	0.00	0.06
Industry	0.10	0.73	0.07	2.44
Inflation	0.01	0.10	-0.00	-0.15
Interaction within Factor Residual Risk	N/A	-	N/A	-
Market	0.74	5.24	0.03	1.15
Private Equity	-0.00	-0.00	-0.00	-0.03
Private Real Estate	0.06	0.40	-0.02	-0.70
Spread	0.09	0.65	0.04	1.54
Style	0.55	3.87	0.37	13.48
Term Structure	-0.02	-0.15	0.01	0.43

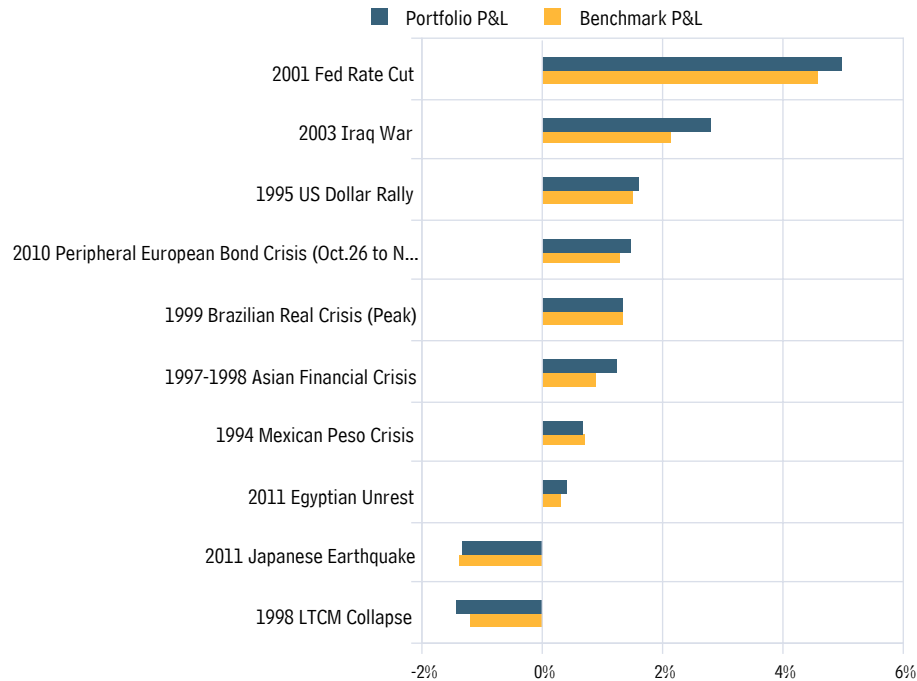
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MODEL: MAC.L

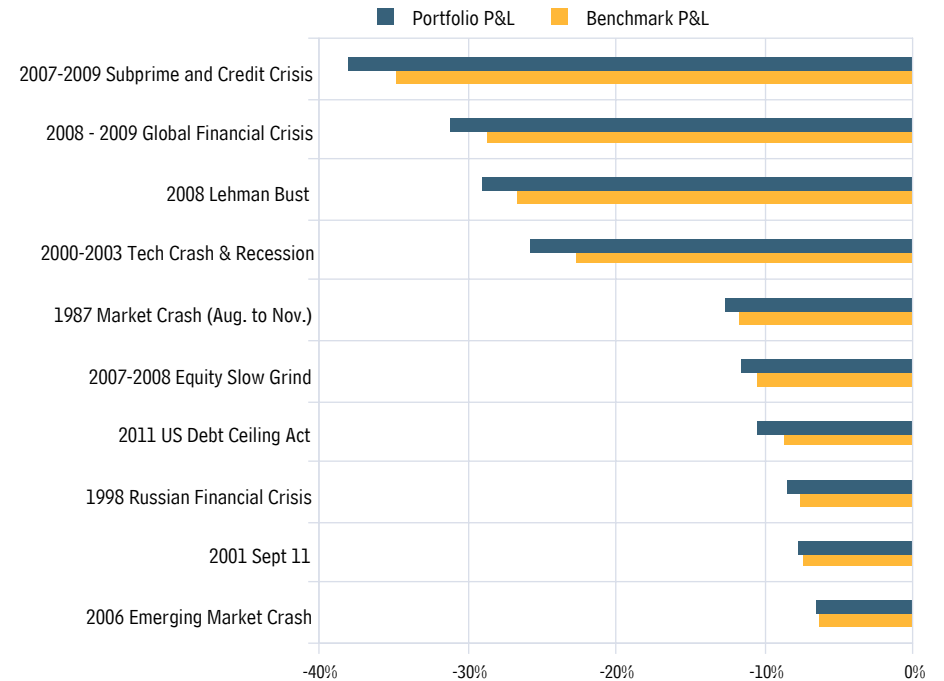
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Stress Scenarios

Top 10 Best Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2001 Fed Rate Cut	4.98	4.57	393,319,874
2003 Iraq War	2.82	2.16	222,780,125
1995 US Dollar Rally	1.61	1.50	127,125,022
2010 Peripheral European Bond Crisis (Oc	1.49	1.29	117,526,984
1999 Brazilian Real Crisis (Peak)	1.33	1.32	104,904,700
1997-1998 Asian Financial Crisis	1.22	0.90	96,761,679
1994 Mexican Peso Crisis	0.66	0.72	51,877,728
2011 Egyptian Unrest	0.39	0.30	31,218,053
2011 Japanese Earthquake	-1.34	-1.39	-106,029,571
1998 LTCM Collapse	-1.44	-1.18	-113,777,071



Top 10 Worst Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2007-2009 Subprime and Credit Crisis	-38.09	-34.70	-3,010,849,189
2008 - 2009 Global Financial Crisis	-31.19	-28.72	-2,465,811,763
2008 Lehman Bust	-28.93	-26.73	-2,286,859,438
2000-2003 Tech Crash & Recession	-25.77	-22.68	-2,036,833,690
1987 Market Crash (Aug. to Nov.)	-12.55	-11.64	-992,145,359
2007-2008 Equity Slow Grind	-11.59	-10.50	-915,857,722
2011 US Debt Ceiling Act	-10.48	-8.60	-828,680,090
1998 Russian Financial Crisis	-8.48	-7.49	-670,304,090
2001 Sept 11	-7.74	-7.35	-611,627,304
2006 Emerging Market Crash	-6.46	-6.35	-510,590,264



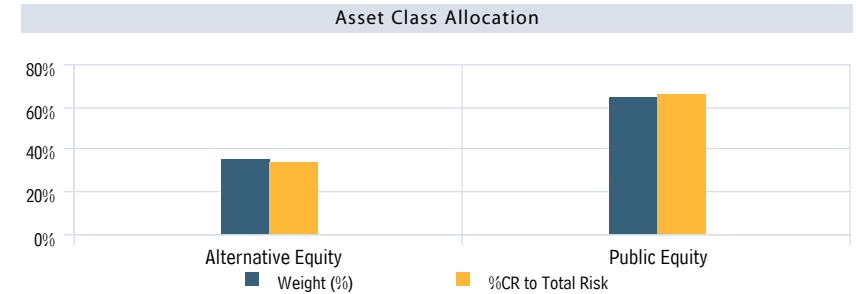
BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: EQUITY
BENCHMARK: EQUITY
POSITIONS: 4,729
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 5,466,113,110
ACCEPTED: 4,680

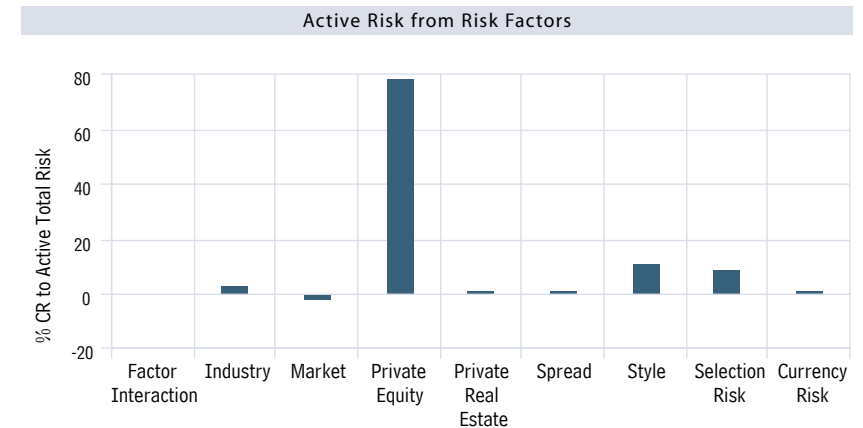
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	19.14	Total	5,466,113,110	100.00	19.14	19.14	100.00
Benchmark Risk	18.21	Alternative Equity	1,930,071,480	35.31	19.64	6.52	34.07
Active Risk	3.47	Public Equity	3,536,041,630	64.69	19.85	12.62	65.93
Portfolio Beta	1.03						



Risk Factor Breakdown

Risk Decomposition						
Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	19.14	100.00	1.00	3.47	100.00	1.00
Local Market Risk	18.27	95.45	1.00	3.47	99.76	1.00
Common Factor Risk	18.20	95.07	1.00	3.17	91.40	0.96
Private Real Estate	1.19	6.22	0.73	0.04	1.16	0.15
Industry	0.14	0.75	0.21	0.10	2.90	0.22
Market	15.52	81.11	0.98	-0.07	-2.07	-0.12
Private Equity	0.49	2.58	0.16	2.73	78.46	0.89
Spread	0.07	0.36	0.67	0.02	0.46	0.16
Style	0.77	4.05	0.73	0.36	10.50	0.31
Selection Risk	0.07	0.38	0.06	0.29	8.36	0.29
Currency Risk	0.87	4.55	0.54	0.01	0.24	0.04



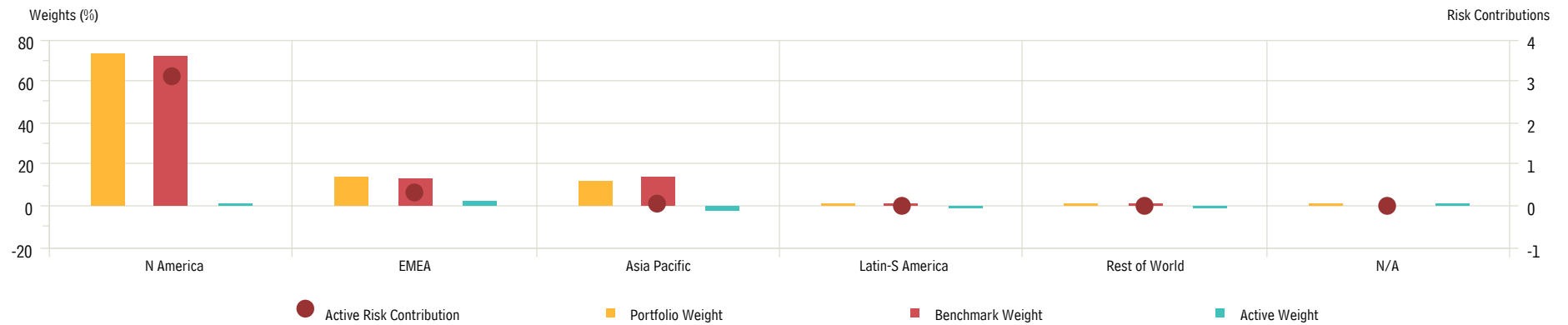
BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: EQUITY
BENCHMARK: EQUITY
POSITIONS: 4,729
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 5,466,113,110
ACCEPTED: 4,680

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	19.14	3.47	100.00	0.03
Asia Pacific	11.80	14.19	-2.39	18.12	0.04	1.20	-0.01
EMEA	14.23	12.53	1.70	22.18	0.32	9.22	0.01
Latin-S America	0.71	0.88	-0.17	29.55	0.00	0.05	-0.00
N America	73.01	72.05	0.96	20.09	3.10	89.34	0.04
N/A	0.00	0.00	0.00	17.89	-0.00	-0.00	-0.01
Rest of World	0.25	0.35	-0.10	17.48	0.01	0.20	-0.01



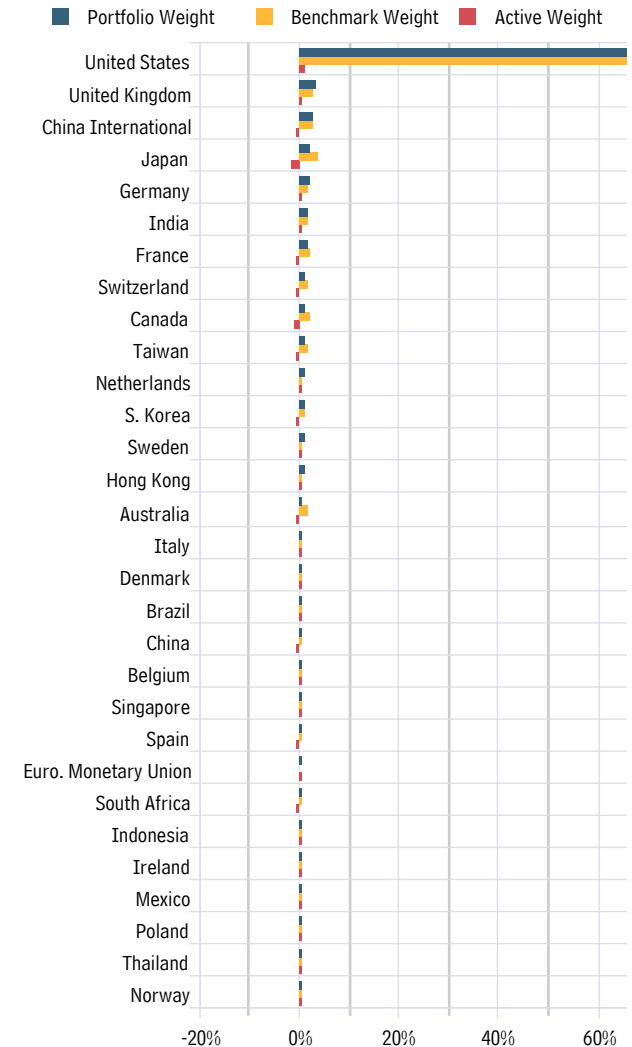
BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: EQUITY
BENCHMARK: EQUITY
POSITIONS: 4,729
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 5,466,113,110
ACCEPTED: 4,680

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	19.14	3.47	100.00	0.03
United States	70.77	69.59	1.18	20.15	3.03	87.36	0.07
United Kingdom	3.28	2.69	0.59	24.32	0.12	3.38	0.05
China International	2.79	2.91	-0.11	28.18	-0.01	-0.22	0.02
Japan	2.36	3.87	-1.51	18.04	0.03	0.89	0.02
Germany	1.96	1.44	0.52	24.14	0.03	0.92	0.05
India	1.65	1.54	0.11	22.83	0.00	0.11	0.03
France	1.38	2.09	-0.71	20.57	0.01	0.27	0.04
Switzerland	1.23	1.79	-0.56	18.75	0.02	0.71	0.04
Canada	1.19	2.14	-0.94	20.93	0.06	1.59	0.04
Taiwan	1.17	1.48	-0.31	27.35	0.00	0.14	0.03
Netherlands	1.17	0.75	0.42	30.91	0.02	0.63	0.06
S. Korea	1.00	1.21	-0.21	25.42	-0.00	-0.02	0.03
Sweden	0.88	0.59	0.29	31.10	0.03	0.77	0.07
Hong Kong	0.88	0.53	0.35	26.14	-0.00	-0.10	0.02
Australia	0.80	1.40	-0.60	25.96	0.01	0.31	0.04
Italy	0.79	0.41	0.38	23.15	0.01	0.42	0.05
Denmark	0.73	0.52	0.21	27.32	0.03	0.72	0.05
Brazil	0.68	0.56	0.12	34.94	0.00	0.04	0.03
China	0.54	0.55	-0.01	29.82	0.01	0.19	0.02
Belgium	0.47	0.18	0.29	23.12	0.01	0.15	0.04
Singapore	0.43	0.24	0.20	17.51	-0.00	-0.07	0.02
Spain	0.42	0.43	-0.01	17.10	0.00	0.11	0.03
Euro. Monetary Union	0.41	0.00	0.41	27.07	0.01	0.30	0.06
South Africa	0.36	0.40	-0.04	28.91	-0.00	-0.02	0.04
Indonesia	0.29	0.20	0.08	24.05	-0.00	-0.02	0.02
Ireland	0.28	0.12	0.16	22.04	0.00	0.00	0.04
Mexico	0.27	0.24	0.02	23.86	-0.00	-0.03	0.03
Poland	0.26	0.08	0.19	29.47	0.01	0.19	0.06
Thailand	0.26	0.25	0.01	25.25	-0.00	-0.01	0.03
Norway	0.23	0.14	0.09	28.03	0.01	0.17	0.04

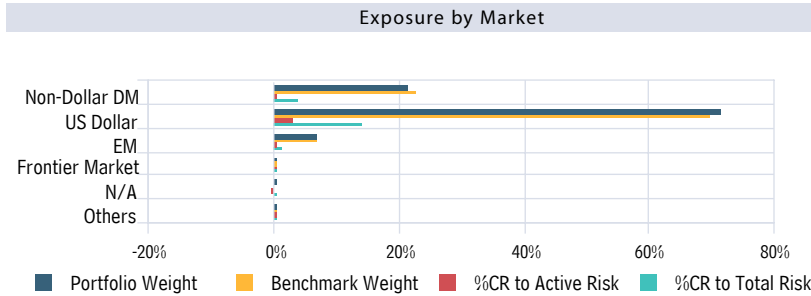


BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: EQUITY
BENCHMARK: EQUITY
POSITIONS: 4,729
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 5,466,113,110
ACCEPTED: 4,680

Portfolio Allocation by Currency



Developed Market Currency				Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)	Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	3,909,810,124.26	87.35	73.93	Indian Rupee	89,969,094.90	0.11	1.19
Euro	386,009,618.14	3.20	7.31	New Taiwan Dollar	64,134,284.05	0.14	1.04
British Pound Sterling	177,085,061.40	3.56	3.50	Korean Won	49,160,471.21	-0.01	0.89
Hong Kong Dollar	176,132,067.80	-0.06	2.26	Brazilian Real	37,402,242.59	0.04	0.67
Japanese Yen	128,919,501.62	0.89	1.56	Chinese Yuan	28,683,341.10	0.20	0.39

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	19.14	19.14	100.00	3.47	100.00
US Dollar	71.53	69.80	1.73	20.07	14.15	73.93	3.03	87.35
Euro	7.06	5.69	1.37	22.57	1.40	7.31	0.11	3.20
British Pound Sterling	3.24	2.69	0.55	24.82	0.67	3.50	0.12	3.56
Hong Kong Dollar	3.22	3.27	-0.05	29.97	0.43	2.26	-0.00	-0.06
Japanese Yen	2.36	3.87	-1.51	18.04	0.30	1.56	0.03	0.89
Indian Rupee	1.65	1.54	0.11	22.83	0.23	1.19	0.00	0.11
Swiss Franc	1.23	1.79	-0.56	18.77	0.19	1.01	0.02	0.71
New Taiwan Dollar	1.17	1.48	-0.31	27.35	0.20	1.04	0.00	0.14
Canadian Dollar	1.09	2.12	-1.03	22.63	0.22	1.16	0.06	1.68
Korean Won	0.90	1.21	-0.31	25.38	0.17	0.89	-0.00	-0.01
Australian Dollar	0.80	1.40	-0.60	25.96	0.18	0.92	0.01	0.31
Danish Krone	0.73	0.52	0.21	27.32	0.16	0.82	0.03	0.72
Swedish Krona	0.70	0.59	0.12	29.53	0.18	0.92	0.02	0.47
Brazilian Real	0.68	0.56	0.12	34.94	0.13	0.67	0.00	0.04
Chinese Yuan	0.52	0.55	-0.02	30.46	0.07	0.39	0.01	0.20

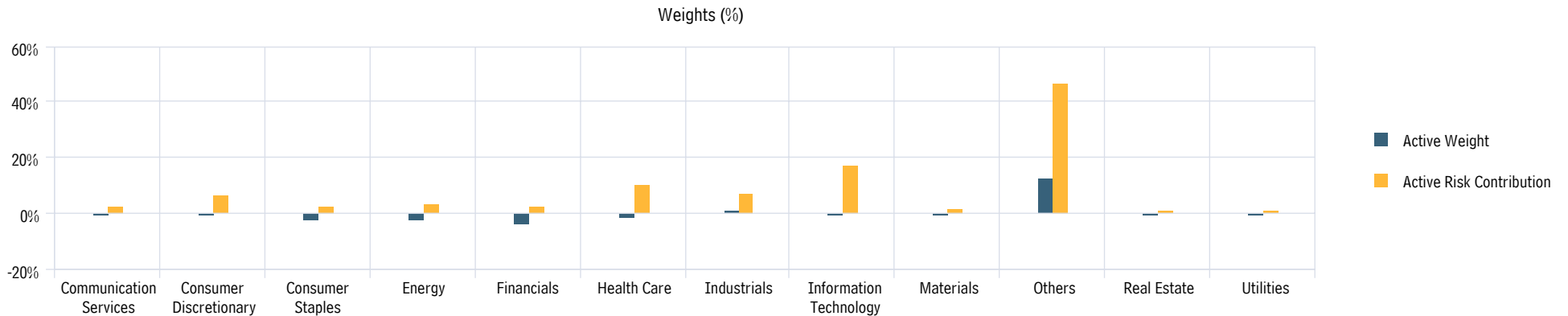
BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: EQUITY
BENCHMARK: EQUITY
POSITIONS: 4,729
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 5,466,113,110
ACCEPTED: 4,680

Portfolio Allocation by GICS Sector

GICS Sector	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	19.14	3.47	100.00	0.03
Communication Services	5.40	5.96	-0.56	23.10	0.09	2.61	0.06
Consumer Discretionary	9.24	9.53	-0.29	27.04	0.22	6.37	0.08
Consumer Staples	4.49	6.59	-2.10	14.52	0.09	2.45	0.02
Energy	2.86	4.94	-2.08	25.58	0.11	3.18	0.01
Financials	9.75	13.82	-4.07	19.21	0.09	2.56	0.04
Health Care	10.55	12.20	-1.65	18.07	0.36	10.47	0.06
Industrials	9.70	9.41	0.28	20.72	0.25	7.24	0.06
Information Technology	17.70	18.12	-0.42	26.34	0.60	17.15	0.10
Materials	3.84	4.38	-0.54	21.97	0.05	1.31	0.04
Others	22.15	9.53	12.63	17.62	1.61	46.41	0.06
Real Estate	1.91	2.67	-0.75	17.45	0.01	0.18	0.04
Utilities	2.41	2.85	-0.44	13.94	0.00	0.06	0.02



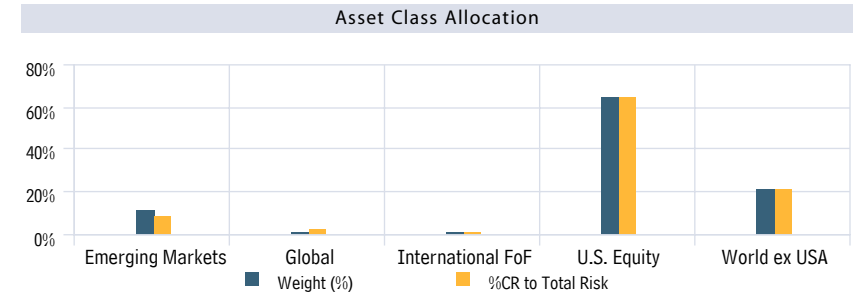
BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Public Equity
BENCHMARK: Public
POSITIONS: 4,484
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 3,536,041,630
ACCEPTED: 4,435

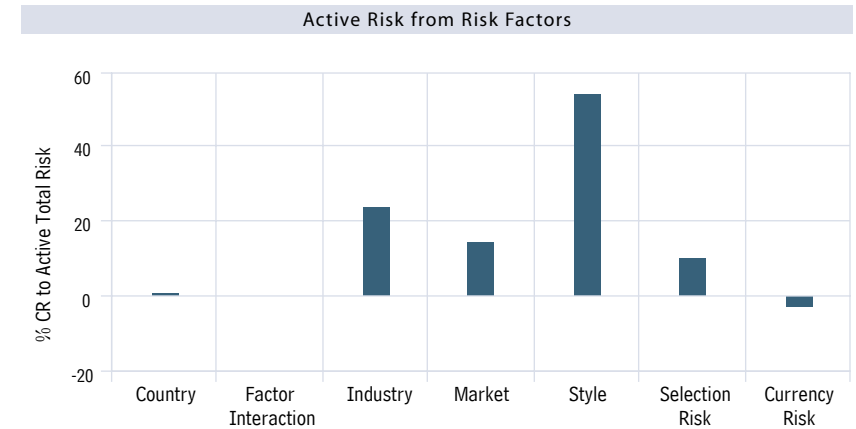
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	19.85	Total	3,536,041,630	100.00	19.85	19.85	100.00
Benchmark Risk	18.88	Emerging Markets	406,835,562	11.51	19.42	1.83	9.21
Active Risk	1.57	Global	54,644,474	1.55	28.91	0.42	2.10
Portfolio Beta	1.05	International FoF	60,184,933	1.70	18.33	0.29	1.44
		U.S. Equity	2,271,968,517	64.25	20.57	12.97	65.34
		World ex USA	742,408,143	21.00	21.87	4.35	21.90



Risk Factor Breakdown

Risk Decomposition						
Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	19.85	100.00	1.00	1.57	100.00	1.00
Local Market Risk	18.95	95.46	1.00	1.61	102.86	0.98
Common Factor Risk	18.87	95.09	1.00	1.45	92.67	0.92
Country	0.00	0.00	0.00	0.01	0.79	0.14
Industry	0.17	0.88	0.21	0.37	23.51	0.61
Market	17.89	90.16	0.99	0.22	14.12	0.40
Style	0.80	4.06	0.79	0.85	54.25	0.76
Selection Risk	0.07	0.37	0.06	0.16	10.19	0.32
Currency Risk	0.90	4.54	0.55	-0.04	-2.86	-0.12



BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Public Equity
BENCHMARK: Public
POSITIONS: 4,484
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 3,536,041,630
ACCEPTED: 4,435

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	19.85	1.57	100.00	0.02
Asia Pacific	15.80	17.23	-1.43	19.18	0.20	12.72	-0.03
EMEA	12.44	15.22	-2.77	24.96	0.69	44.32	0.00
Latin-S America	0.87	1.06	-0.20	29.36	0.01	0.33	-0.03
N America	70.61	66.06	4.54	20.67	0.66	41.97	0.02
Rest of World	0.28	0.43	-0.15	17.86	0.01	0.66	-0.07



BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Public Equity
BENCHMARK: Public
POSITIONS: 4,484
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 3,536,041,630
ACCEPTED: 4,435

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	19.85	1.57	100.00	0.02
United States	68.16	63.08	5.07	20.71	0.52	33.42	0.13
China International	4.31	3.53	0.78	28.19	-0.08	-4.98	0.09
Japan	2.78	4.70	-1.92	21.12	0.18	11.38	0.07
United Kingdom	2.30	3.27	-0.97	26.70	0.19	12.23	0.10
India	2.12	1.87	0.25	23.24	0.00	0.04	0.08
Germany	1.95	1.75	0.20	30.38	0.12	7.93	0.15
Taiwan	1.81	1.80	0.02	27.36	0.02	1.15	0.09
Netherlands	1.46	0.91	0.55	35.18	0.09	5.74	0.18
S. Korea	1.44	1.47	-0.03	26.08	-0.00	-0.12	0.10
Hong Kong	1.32	0.64	0.68	26.40	-0.01	-0.33	0.08
Switzerland	1.30	2.17	-0.88	20.46	0.07	4.73	0.09
France	1.26	2.54	-1.28	24.27	0.05	3.07	0.10
Brazil	0.89	0.68	0.21	34.24	-0.01	-0.61	0.08
Sweden	0.86	0.71	0.15	35.23	0.05	3.09	0.18
Denmark	0.84	0.64	0.21	28.00	0.04	2.70	0.12
Canada	0.84	2.59	-1.75	25.78	0.11	6.97	0.08
Australia	0.82	1.70	-0.88	30.12	0.07	4.24	0.11
Italy	0.76	0.50	0.26	26.42	0.02	1.49	0.12
Singapore	0.65	0.29	0.36	17.65	-0.02	-1.03	0.07
South Africa	0.51	0.48	0.03	30.04	-0.00	-0.01	0.10
Belgium	0.47	0.22	0.25	26.69	-0.00	-0.04	0.09
Indonesia	0.42	0.25	0.18	24.51	-0.01	-0.52	0.06
Thailand	0.40	0.30	0.10	25.29	-0.00	-0.27	0.07
Mexico	0.38	0.30	0.08	25.50	-0.00	-0.29	0.08
China	0.36	0.67	-0.31	49.01	0.04	2.82	0.05
Ireland	0.24	0.15	0.09	31.92	0.00	0.30	0.14
Norway	0.22	0.17	0.05	33.00	0.01	0.66	0.10
Spain	0.16	0.52	-0.36	23.38	0.02	1.28	0.07
Malaysia	0.15	0.20	-0.06	17.87	0.00	0.19	0.07
Poland	0.15	0.09	0.05	35.04	-0.00	-0.17	0.11

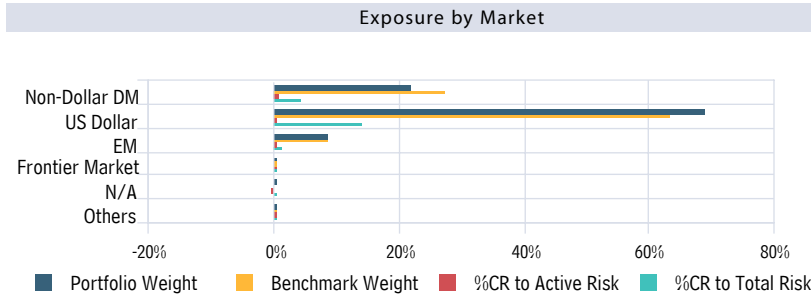


BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Public Equity
BENCHMARK: Public
POSITIONS: 4,484
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 3,536,041,630
ACCEPTED: 4,435

Portfolio Allocation by Currency



Developed Market Currency				Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)	Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	2,434,238,011.54	35.51	70.61	Indian Rupee	75,020,764.88	0.04	1.52
Euro	226,679,354.25	20.22	7.73	New Taiwan Dollar	64,068,424.67	1.15	1.60
Hong Kong Dollar	174,643,663.57	-1.80	3.58	Korean Won	45,232,325.71	0.01	1.28
Japanese Yen	98,471,238.28	11.38	2.18	Brazilian Real	31,295,360.39	-0.61	0.83
British Pound Sterling	80,905,690.26	12.64	2.61	CNH	18,587,222.29	-3.35	0.06

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	19.85	19.85	100.00	1.57	100.00
US Dollar	68.84	63.33	5.51	20.71	14.01	70.61	0.56	35.51
Euro	6.41	6.91	-0.50	26.74	1.53	7.73	0.32	20.22
Hong Kong Dollar	4.94	3.97	0.96	30.07	0.71	3.58	-0.03	-1.80
Japanese Yen	2.78	4.70	-1.92	21.12	0.43	2.18	0.18	11.38
British Pound Sterling	2.29	3.27	-0.98	27.06	0.52	2.61	0.20	12.64
Indian Rupee	2.12	1.87	0.25	23.24	0.30	1.52	0.00	0.04
New Taiwan Dollar	1.81	1.80	0.02	27.36	0.32	1.60	0.02	1.15
Swiss Franc	1.30	2.17	-0.88	20.46	0.23	1.14	0.07	4.73
Korean Won	1.28	1.47	-0.19	26.11	0.25	1.28	0.00	0.01
Brazilian Real	0.89	0.68	0.21	34.24	0.17	0.83	-0.01	-0.61
Danish Krone	0.84	0.64	0.21	28.00	0.18	0.92	0.04	2.70
Canadian Dollar	0.84	2.58	-1.74	25.74	0.19	0.94	0.11	6.98
Australian Dollar	0.82	1.70	-0.88	30.12	0.21	1.07	0.07	4.24
Singapore Dollar	0.65	0.29	0.36	17.65	0.08	0.40	-0.02	-1.03
Swedish Krona	0.59	0.71	-0.13	33.32	0.16	0.82	0.02	0.96

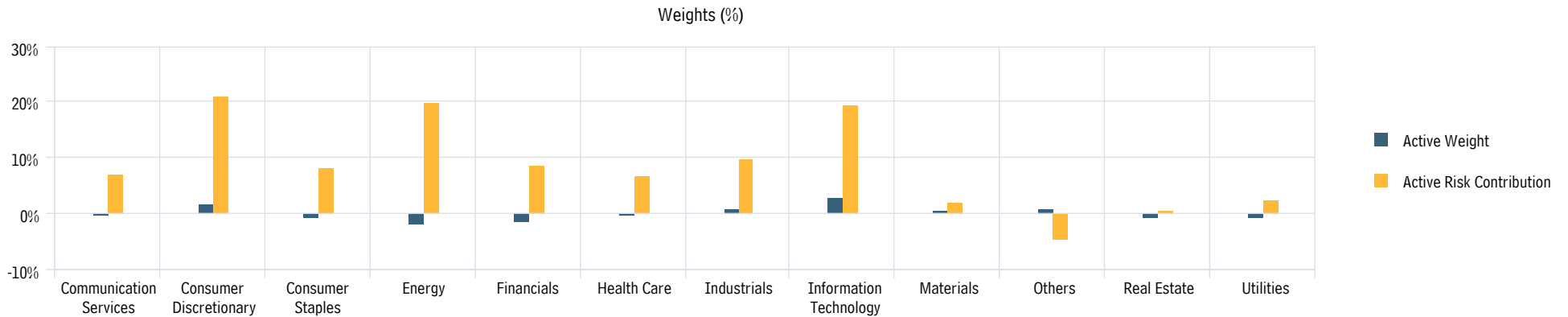
BarraOne Equity Summary

COMPANY: NYCRC - BERS
PORTFOLIO: Public Equity
BENCHMARK: Public
POSITIONS: 4,484
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 3,536,041,630
ACCEPTED: 4,435

Portfolio Allocation by GICS Sector

GICS Sector	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	19.85	1.57	100.00	0.02
Communication Services	6.46	6.57	-0.11	24.51	0.11	6.82	0.12
Consumer Discretionary	12.23	10.59	1.64	26.72	0.33	20.97	0.17
Consumer Staples	6.53	7.35	-0.82	14.30	0.13	8.10	0.06
Energy	3.59	5.48	-1.89	28.90	0.31	19.67	0.03
Financials	13.95	15.57	-1.62	19.17	0.13	8.61	0.09
Health Care	13.12	13.27	-0.15	17.07	0.10	6.69	0.10
Industrials	11.31	10.47	0.84	21.19	0.15	9.58	0.12
Information Technology	22.14	19.60	2.54	25.62	0.30	19.36	0.17
Materials	5.53	5.02	0.51	21.79	0.03	2.11	0.10
Others	0.67	0.00	0.67	1.69	-0.07	-4.76	0.01
Real Estate	1.96	2.91	-0.96	22.25	0.01	0.48	0.10
Utilities	2.51	3.16	-0.65	18.51	0.04	2.36	0.05



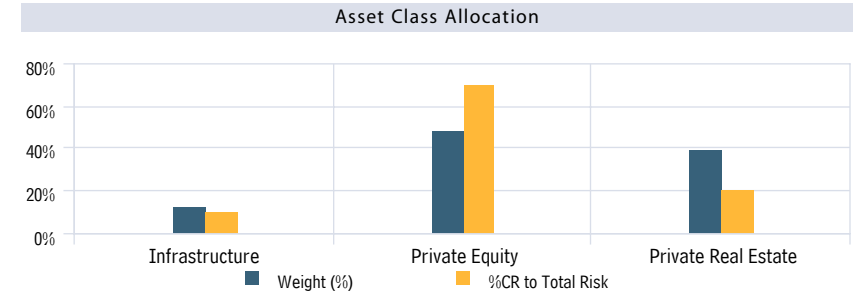
BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Alternative Equity
BENCHMARK: Alternative
POSITIONS: 245
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 1,930,071,480
ACCEPTED: 245

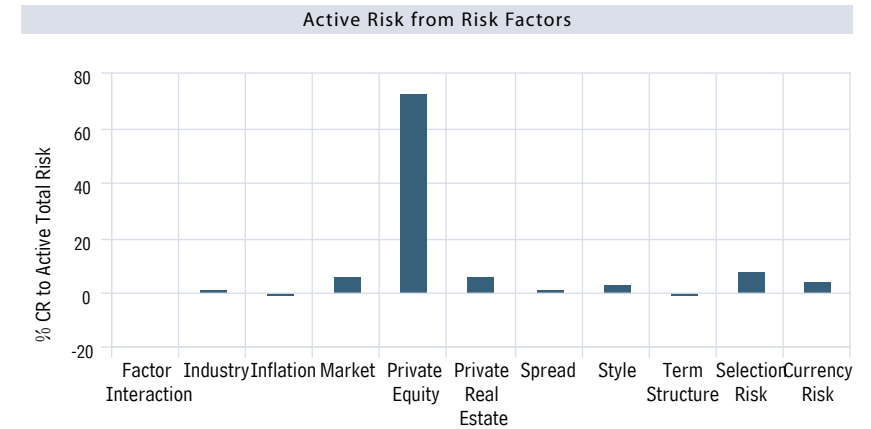
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	19.64	Total	1,930,071,480	100.00	19.64	19.64	100.00
Benchmark Risk	16.49	Infrastructure	251,883,152	13.05	16.95	1.98	10.10
Active Risk	10.22	Private Equity	926,530,144	48.00	29.08	13.64	69.48
Portfolio Beta	1.02	Private Real Estate	751,658,184	38.94	13.24	4.01	20.43



Risk Factor Breakdown

Risk Decomposition						
Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	19.64	100.00	1.00	10.22	100.00	1.00
Local Market Risk	18.89	96.19	1.00	9.86	96.51	0.99
Common Factor Risk	18.58	94.60	0.99	9.07	88.74	0.95
Private Real Estate	3.37	17.18	0.73	0.63	6.18	0.16
Country	-0.01	-0.03	-0.04	-0.00	-0.04	-0.04
Industry	0.12	0.61	0.15	0.05	0.49	0.08
Inflation	0.00	0.00	0.00	-0.02	-0.19	-0.07
Market	10.35	52.69	0.86	0.61	5.93	0.22
Private Equity	3.87	19.69	0.44	7.43	72.74	0.85
Spread	0.17	0.86	0.59	0.06	0.58	0.21
Style	0.69	3.50	0.52	0.32	3.11	0.23
Term Structure	0.02	0.09	0.03	-0.01	-0.07	-0.02
Selection Risk	0.31	1.60	0.13	0.79	7.76	0.28
Currency Risk	0.75	3.81	0.47	0.36	3.49	0.22



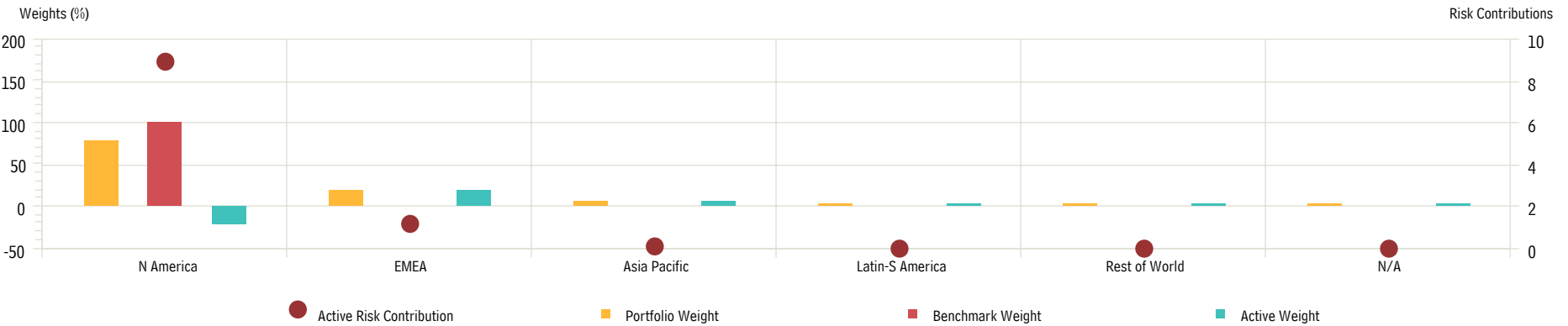
BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Alternative Equity
BENCHMARK: Alternative
POSITIONS: 245
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 1,930,071,480
ACCEPTED: 245

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	19.64	10.22	100.00	0.10
Asia Pacific	4.47	0.00	4.47	13.47	0.10	1.00	0.02
EMEA	17.51	0.00	17.51	20.00	1.18	11.59	0.07
Latin-S America	0.41	0.00	0.41	36.62	0.02	0.20	0.05
N America	77.40	100.00	-22.60	21.44	8.89	87.02	0.04
N/A	0.01	0.00	0.01	17.89	0.00	0.00	0.03
Rest of World	0.19	0.00	0.19	29.24	0.02	0.18	0.10



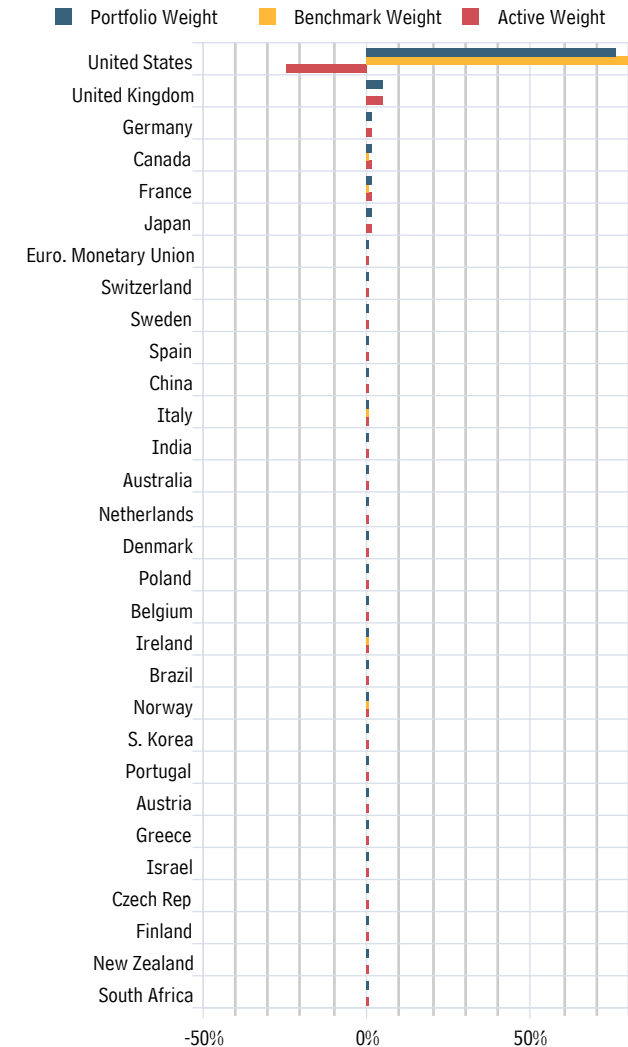
BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Alternative Equity
BENCHMARK: Alternative
POSITIONS: 245
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 1,930,071,480
ACCEPTED: 245

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	19.64	10.22	100.00	0.10
United States	75.56	99.99	-24.42	21.58	8.73	85.45	0.05
United Kingdom	5.09	0.00	5.09	24.27	0.41	3.98	0.08
Germany	1.97	0.00	1.97	15.55	0.08	0.83	0.05
Canada	1.84	0.01	1.83	18.38	0.16	1.56	0.09
France	1.61	0.00	1.61	17.59	0.08	0.80	0.06
Japan	1.58	0.00	1.58	13.43	0.02	0.15	0.01
Euro. Monetary Union	1.16	0.00	1.16	27.09	0.08	0.74	0.07
Switzerland	1.12	0.00	1.12	18.40	0.06	0.63	0.06
Sweden	0.92	0.00	0.92	28.07	0.08	0.77	0.09
Spain	0.90	0.00	0.90	16.51	0.04	0.39	0.05
China	0.86	0.00	0.86	20.42	0.02	0.23	0.03
Italy	0.85	0.00	0.85	21.72	0.06	0.60	0.08
India	0.77	0.00	0.77	22.91	0.03	0.27	0.04
Australia	0.75	0.00	0.75	21.03	0.02	0.19	0.03
Netherlands	0.63	0.00	0.63	17.83	0.03	0.33	0.06
Denmark	0.52	0.00	0.52	32.01	0.06	0.56	0.11
Poland	0.48	0.00	0.48	29.46	0.04	0.42	0.09
Belgium	0.47	0.00	0.47	25.90	0.03	0.31	0.07
Ireland	0.36	0.00	0.36	14.30	0.01	0.07	0.02
Brazil	0.32	0.00	0.32	46.52	0.02	0.19	0.07
Norway	0.25	0.00	0.25	23.55	0.02	0.17	0.08
S. Korea	0.20	0.00	0.20	20.39	0.01	0.07	0.04
Portugal	0.19	0.00	0.19	18.60	0.01	0.10	0.06
Austria	0.15	0.00	0.15	20.90	0.01	0.08	0.06
Greece	0.15	0.00	0.15	35.92	0.02	0.18	0.13
Israel	0.15	0.00	0.15	32.06	0.01	0.14	0.10
Czech Rep	0.14	0.00	0.14	25.87	0.01	0.12	0.09
Finland	0.13	0.00	0.13	32.24	0.01	0.13	0.11
New Zealand	0.12	0.00	0.12	20.39	0.00	0.04	0.04
South Africa	0.09	0.00	0.09	21.32	0.00	0.03	0.04

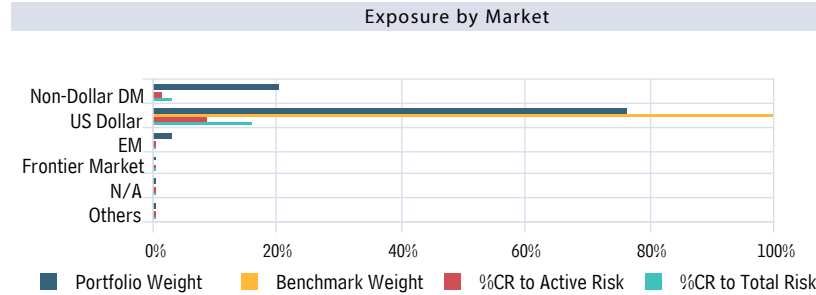


BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Alternative Equity
BENCHMARK: Alternative
POSITIONS: 245
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 1,930,071,480
ACCEPTED: 245

Portfolio Allocation by Currency



Developed Market Currency				Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)	Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	1,475,572,112.72	85.36	82.07	Chinese Yuan	15,971,463.53	0.23	0.37
Euro	159,330,263.90	4.60	5.77	Indian Rupee	14,948,330.02	0.27	0.47
British Pound Sterling	96,179,371.13	4.07	4.69	Polish Zloty	9,264,908.48	0.42	0.45
Japanese Yen	30,448,263.34	0.15	0.36	Brazilian Real	6,106,882.20	0.19	0.29
Canadian Dollar	30,173,652.15	1.57	1.51	Korean Won	3,928,145.50	0.07	0.12

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	19.64	19.64	100.00	10.22	100.00
US Dollar	76.45	100.00	-23.55	21.33	16.12	82.07	8.72	85.36
Euro	8.26	0.00	8.26	18.10	1.13	5.77	0.47	4.60
British Pound Sterling	4.98	0.00	4.98	24.90	0.92	4.69	0.42	4.07
Japanese Yen	1.58	0.00	1.58	13.43	0.07	0.36	0.02	0.15
Canadian Dollar	1.56	0.00	1.56	21.37	0.30	1.51	0.16	1.57
Swiss Franc	1.11	0.00	1.11	18.48	0.14	0.70	0.06	0.63
Swedish Krona	0.92	0.00	0.92	28.07	0.19	0.98	0.08	0.77
Chinese Yuan	0.83	0.00	0.83	21.19	0.07	0.37	0.02	0.23
Indian Rupee	0.77	0.00	0.77	22.91	0.09	0.47	0.03	0.27
Australian Dollar	0.75	0.00	0.75	21.03	0.11	0.55	0.02	0.19
Danish Krone	0.52	0.00	0.52	32.01	0.11	0.57	0.06	0.56
Polish Zloty	0.48	0.00	0.48	29.46	0.09	0.45	0.04	0.42
Brazilian Real	0.32	0.00	0.32	46.52	0.06	0.29	0.02	0.19
Norwegian Krone	0.21	0.00	0.21	27.96	0.04	0.23	0.02	0.18
Korean Won	0.20	0.00	0.20	20.39	0.02	0.12	0.01	0.07

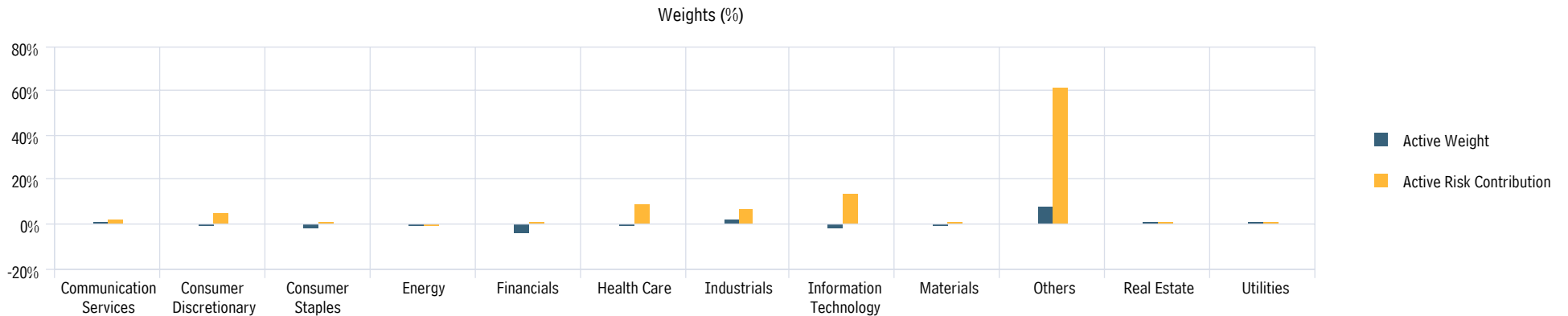
BarraOne Equity Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Alternative Equity
BENCHMARK: Alternative
POSITIONS: 245
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 1,930,071,480
ACCEPTED: 245

Portfolio Allocation by GICS Sector

GICS Sector	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	19.64	10.22	100.00	0.10
Communication Services	3.45	3.10	0.34	21.46	0.22	2.18	0.08
Consumer Discretionary	3.76	4.59	-0.83	32.97	0.45	4.42	0.11
Consumer Staples	0.75	3.03	-2.28	24.73	0.07	0.73	0.03
Energy	1.53	2.41	-0.88	13.00	-0.02	-0.17	0.05
Financials	2.05	5.67	-3.61	23.02	0.11	1.06	0.06
Health Care	5.84	7.19	-1.35	27.55	0.90	8.82	0.09
Industrials	6.74	4.49	2.26	21.92	0.67	6.54	0.09
Information Technology	9.57	11.20	-1.64	33.71	1.44	14.06	0.11
Materials	0.74	1.39	-0.65	30.44	0.08	0.76	0.09
Others	61.51	54.00	7.51	17.97	6.22	60.88	0.03
Real Estate	1.84	1.52	0.31	11.56	0.06	0.61	0.04
Utilities	2.23	1.41	0.82	8.38	0.01	0.09	0.01



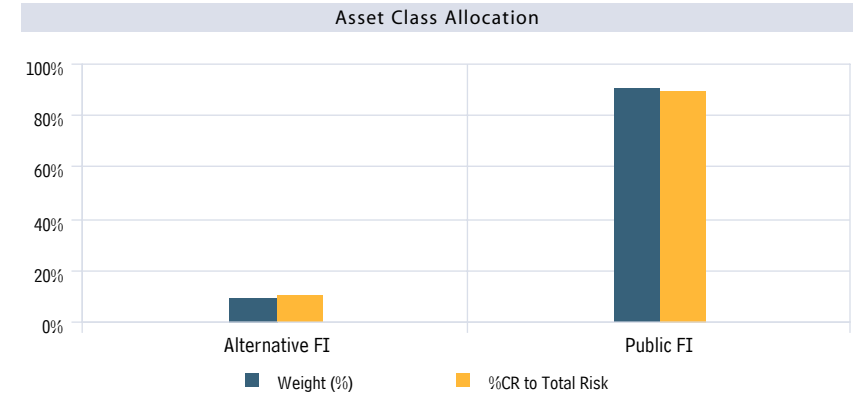
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 3,734
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,438,435,346
ACCEPTED: 3,691

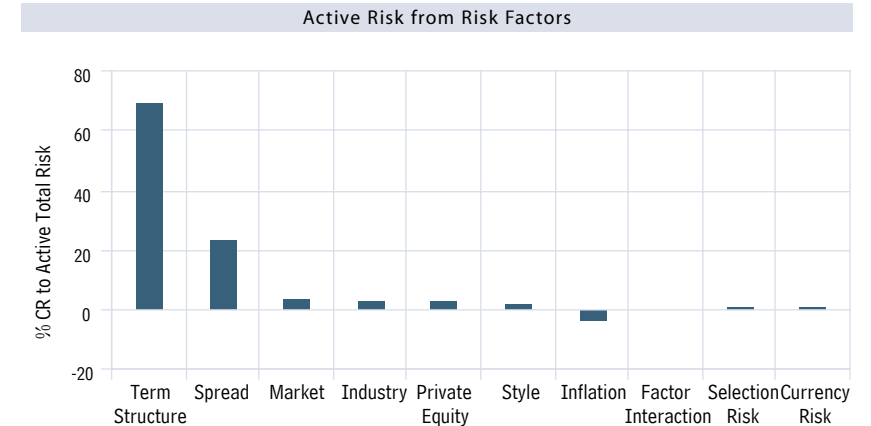
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	5.06	Total	2,438,435,346	100.00	5.06	5.06	100.00
Benchmark Risk	6.57	Alternative FI	234,393,140	9.61	10.12	0.52	10.33
Active Risk	2.93	Public FI	2,204,042,205	90.39	5.10	4.54	89.67
Portfolio Beta	0.70						
Cont. to Eff. Duration	5.15						
Convexity	0.46						
Yield to Worst (%)	5.53						
OAS to Swap (bp)	167.81						



Risk Factor Breakdown

Risk Decomposition						
Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	5.06	100.00	1.00	2.93	100.00	1.00
Local Market Risk	5.02	99.12	1.00	2.93	99.77	1.00
Common Factor Risk	5.00	98.77	1.00	2.90	98.84	0.99
Implied Volatility	0.09	1.85	0.59	-0.00	-0.09	-0.03
Industry	-0.01	-0.10	-0.02	0.08	2.88	0.31
Inflation	0.12	2.27	0.19	-0.12	-4.04	-0.49
Market	0.12	2.44	0.49	0.10	3.47	0.40
Private Equity	0.04	0.86	0.09	0.08	2.57	0.16
Spread	1.32	25.97	0.48	0.69	23.61	0.62
Style	0.03	0.51	0.21	0.04	1.38	0.33
Term Structure	3.29	65.05	0.73	2.03	69.04	0.87
Selection Risk	0.02	0.35	0.06	0.03	0.93	0.10
Currency Risk	0.04	0.88	0.47	0.01	0.23	0.07



BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 3,734
MODEL: MAC.L

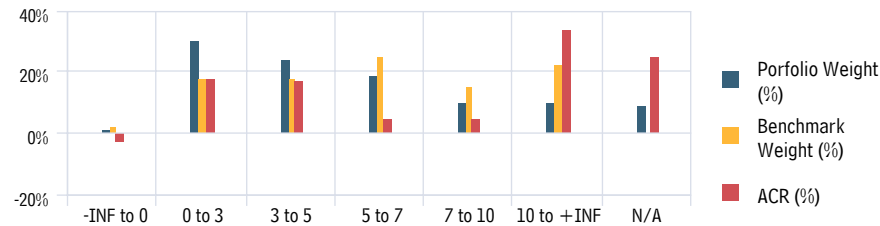
CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,438,435,346
ACCEPTED: 3,691

Portfolio by Factor Breakdowns

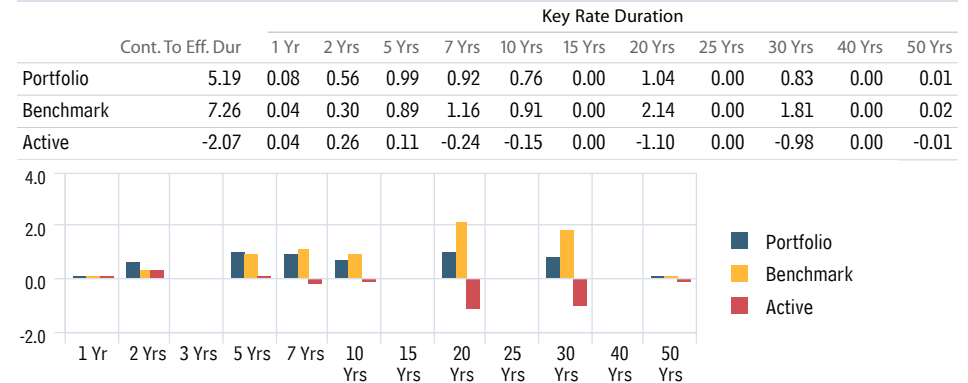
Top 10 Spread Factor									
Spread Factor	Volatility	Exposure (Residual)				Correlation	Contribution (Residual)		
		Portfolio	Benchmark	Active	MCAR		to TR	to AR	to AR%
US Consumer Discretionary HY S	46.59	1.34	0.56	0.78	0.27	0.59	0.29	0.21	7.22
US Energy HY Spread	47.24	0.45	0.22	0.23	0.30	0.64	0.08	0.07	2.35
US Industrials HY Spread	44.78	0.45	0.22	0.23	0.28	0.62	0.08	0.06	2.21
EU Consumer Discretionary Spre	52.25	0.27	0.01	0.26	0.22	0.41	0.07	0.06	1.95
US Health Care HY Spread	45.18	0.33	0.13	0.20	0.25	0.56	0.07	0.05	1.74
US Financials HY Spread	38.69	0.48	0.26	0.22	0.23	0.60	0.07	0.05	1.73
US Materials HY Spread	46.61	0.29	0.12	0.17	0.29	0.63	0.05	0.05	1.70
US Corporate HY Spread	41.67	0.14	0.00	0.14	0.26	0.62	0.02	0.04	1.20
US Telecoms HY Spread	44.28	0.19	0.10	0.09	0.25	0.57	0.04	0.02	0.78
CA Corporate HY Spread	37.61	0.21	0.10	0.12	0.18	0.48	-0.00	0.02	0.73

Top 10 Term Structure									
Term Structure	Volatility	Exposure (Residual)				Correlation	Contribution (Residual)		
		Portfolio	Benchmark	Active	MCAR		to TR	to AR	to AR%
USD Rate 20Y	0.92	0.95	2.14	-1.19	-0.01	-0.87	0.59	0.95	32.52
USD Rate 30Y	0.90	0.76	1.81	-1.05	-0.01	-0.84	0.47	0.80	27.22
USD Rate 10Y	1.05	1.03	1.37	-0.34	-0.01	-0.83	0.79	0.30	10.10
USD Rate 5Y	1.07	1.40	1.58	-0.18	-0.01	-0.77	1.04	0.15	5.02
USD Rate 50Y	0.90	0.01	0.02	-0.01	-0.01	-0.84	0.00	0.01	0.35
GBP Rate 2Y	1.47	-0.00	0.00	-0.00	-0.00	-0.31	-0.00	0.00	0.00
EUR Rate 1Y	0.83	-0.00	0.00	-0.00	-0.00	-0.33	-0.00	0.00	0.00
GBP Rate 1Y	1.17	-0.00	0.00	-0.00	-0.00	-0.26	-0.00	0.00	0.00
GBP Rate 1M	0.68	0.00	0.00	0.00	-0.00	-0.06	0.00	-0.00	-0.00
GBP Rate 6M	1.00	0.00	0.00	0.00	-0.00	-0.19	0.00	-0.00	-0.00

%CR to Active Risk by Duration Buckets



Key Rate Duration



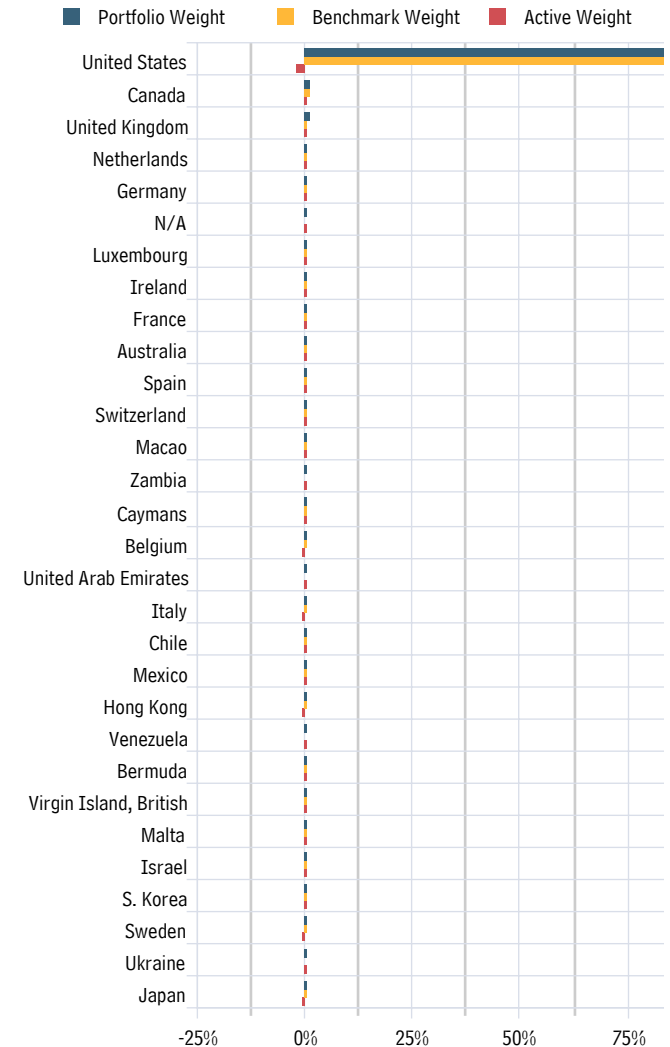
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 3,734
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,438,435,346
ACCEPTED: 3,691

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	0.00	5.06	2.93	100.00	0.03
United States	92.93	94.95	-2.02	4.98	2.70	91.96	-0.03
Canada	1.34	1.22	0.12	6.69	0.01	0.38	-0.01
United Kingdom	1.22	0.87	0.35	5.54	0.02	0.82	-0.01
Netherlands	0.67	0.33	0.34	14.94	0.04	1.21	0.01
Germany	0.60	0.11	0.48	21.84	0.06	1.99	0.05
N/A	0.54	0.00	0.54	18.74	0.06	2.07	0.07
Luxembourg	0.51	0.40	0.11	7.59	0.01	0.25	0.01
Ireland	0.45	0.28	0.17	6.92	0.01	0.37	-0.00
France	0.28	0.19	0.09	7.74	0.01	0.20	-0.01
Australia	0.23	0.16	0.07	6.13	0.00	0.14	-0.02
Spain	0.18	0.09	0.09	5.09	0.00	0.14	-0.02
Switzerland	0.17	0.10	0.07	9.30	0.00	0.15	-0.01
Macao	0.11	0.05	0.06	10.08	0.00	0.09	0.00
Zambia	0.10	0.00	0.10	3.68	0.01	0.19	0.01
Caymans	0.10	0.07	0.03	9.97	0.00	0.06	0.01
Belgium	0.10	0.12	-0.03	14.35	-0.00	-0.01	-0.06
United Arab Emirates	0.09	0.00	0.09	7.60	0.01	0.18	0.01
Italy	0.09	0.14	-0.05	14.24	-0.00	-0.02	0.01
Chile	0.08	0.01	0.07	7.23	0.00	0.11	-0.00
Mexico	0.07	0.05	0.02	5.30	0.00	0.08	-0.03
Hong Kong	0.06	0.13	-0.07	12.62	-0.00	-0.06	-0.02
Venezuela	0.06	0.00	0.06	2.42	0.00	0.10	0.01
Bermuda	0.04	0.02	0.02	6.20	0.00	0.05	-0.00
Virgin Island, British	0.04	0.02	0.02	10.79	0.00	0.02	0.00
Malta	0.02	0.01	0.01	14.59	0.00	0.02	0.02
Israel	0.02	0.01	0.01	11.33	0.00	0.03	0.00
S. Korea	0.02	0.01	0.01	3.76	0.00	0.01	-0.02
Sweden	0.01	0.02	-0.00	2.94	-0.00	-0.01	0.01
Ukraine	0.01	0.00	0.01	52.41	0.00	0.10	0.24
Japan	0.01	0.31	-0.30	14.35	-0.01	-0.17	-0.03

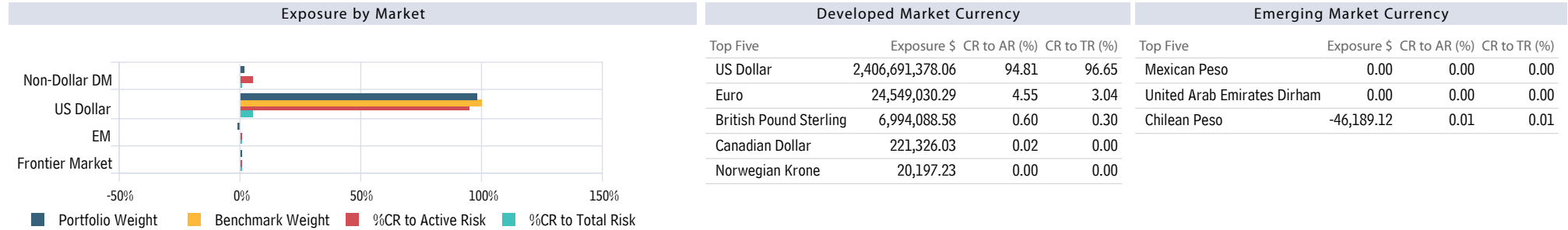


BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 3,734
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,438,435,346
ACCEPTED: 3,691

Portfolio Allocation by Currency



Top 15 Currencies by Weight%								
Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	5.06	5.06	100.00	2.93	100.00
US Dollar	98.70	100.00	-1.30	4.96	4.89	96.65	2.78	94.81
Euro	1.01	0.00	1.01	25.24	0.15	3.04	0.13	4.55
British Pound Sterling	0.29	0.00	0.29	10.66	0.02	0.30	0.02	0.60
Canadian Dollar	0.01	0.00	0.01	7.01	0.00	0.00	0.00	0.02
Norwegian Krone	0.00	0.00	0.00	13.34	0.00	0.00	0.00	0.00
Australian Dollar	0.00	0.00	0.00	10.88	0.00	0.00	0.00	0.00
Singapore Dollar	0.00	0.00	0.00	4.79	0.00	0.00	0.00	0.00
Mexican Peso	0.00	0.00	0.00	11.83	0.00	0.00	0.00	0.00
United Arab Emirates Dirham	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Swiss Franc	-0.00	0.00	-0.00	8.09	-0.00	-0.00	-0.00	-0.00
Swedish Krona	-0.00	0.00	-0.00	11.24	-0.00	-0.00	-0.00	-0.00
Japanese Yen	-0.00	0.00	-0.00	9.56	-0.00	-0.00	-0.00	-0.00
Chilean Peso	-0.00	0.00	-0.00	303.08	0.00	0.01	0.00	0.01

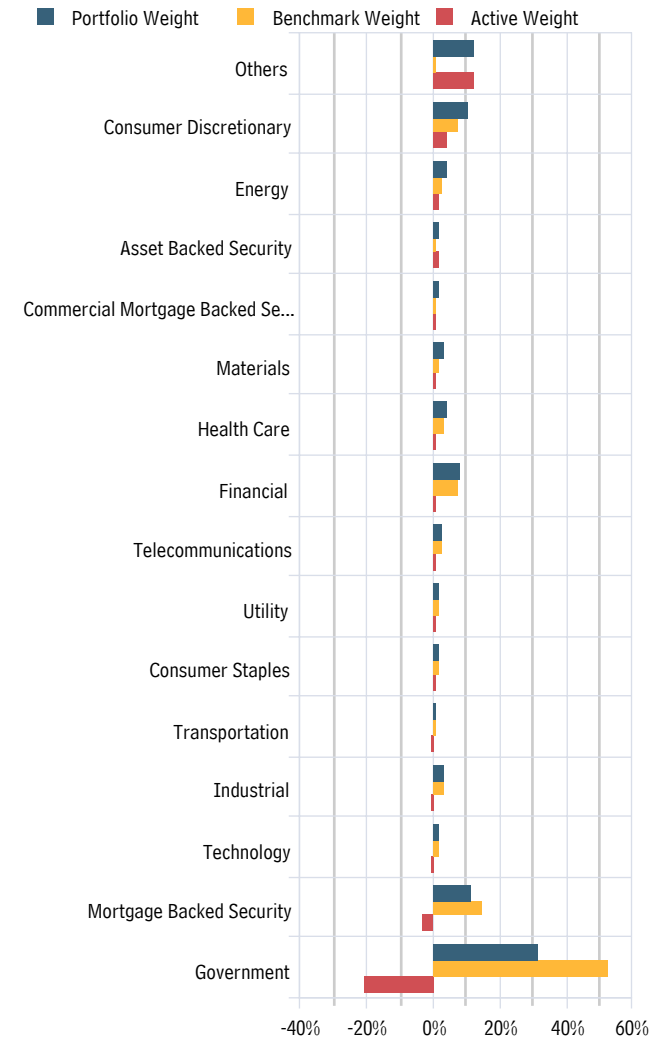
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 3,734
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,438,435,346
ACCEPTED: 3,691

Portfolio Allocation by Bond Sector

Sector	Weight (%)			Cont. To Eff. Dur	Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	5.19	5.06	2.93	100.00	0.03
Government	31.85	52.54	-20.69	2.13	5.29	1.34	45.75	-0.06
Others	12.18	0.00	12.18	0.04	6.52	0.93	31.76	0.02
Mortgage Backed Security	11.10	14.22	-3.12	0.76	6.83	-0.03	-0.89	-0.05
Consumer Discretionary	10.88	7.06	3.81	0.53	8.40	0.25	8.68	0.01
Financial	7.84	7.13	0.71	0.43	5.90	0.02	0.64	-0.02
Energy	4.18	2.58	1.60	0.17	6.10	0.12	4.10	-0.00
Health Care	3.77	2.93	0.85	0.24	7.45	0.04	1.50	-0.02
Industrial	3.37	3.51	-0.14	0.13	6.98	0.02	0.85	0.01
Materials	2.90	1.77	1.13	0.12	6.61	0.07	2.39	0.01
Telecommunications	2.49	2.06	0.44	0.15	7.38	0.01	0.30	-0.01
Utility	1.95	1.55	0.40	0.12	5.57	0.03	1.05	-0.03
Technology	1.66	1.89	-0.23	0.10	7.48	0.02	0.85	-0.02
Asset Backed Security	1.55	0.08	1.47	0.07	4.07	0.03	0.91	-0.03
Consumer Staples	1.45	1.40	0.05	0.09	6.58	0.01	0.40	-0.03
Commercial Mortgage Backed	1.22	0.06	1.15	0.04	2.91	0.03	1.09	-0.02
Transportation	0.83	0.88	-0.05	0.04	5.86	0.00	0.12	-0.01
Agency	0.40	0.12	0.28	0.03	6.79	-0.00	-0.14	-0.04
Local/Provincial	0.22	0.08	0.14	0.03	8.91	-0.00	-0.15	-0.06
Collateralized Loan Obligt	0.15	0.00	0.15	-0.01	17.11	0.02	0.75	0.10
Sovereign	0.01	0.06	-0.05	0.00	50.81	0.00	0.10	0.00



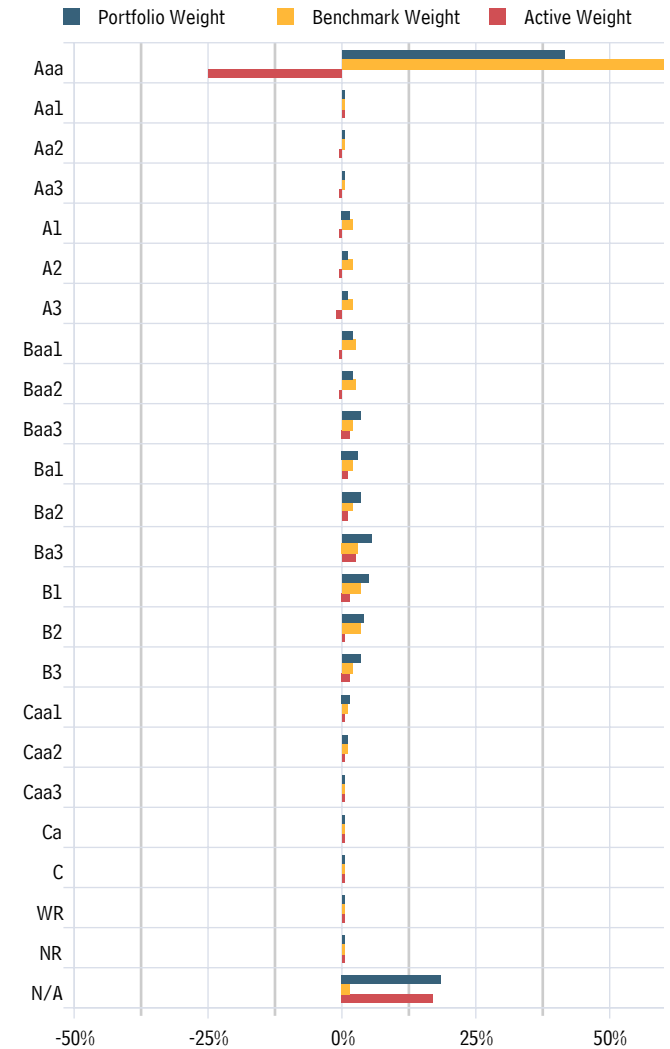
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 3,734
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,438,435,346
ACCEPTED: 3,691

Portfolio Allocation by Moody's Rating

Rating	Weight (%)			Cont. To Eff. Dur	Spread Duration	Total Risk	Active Risk CR	%CR to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	5.19	5.43	5.06	2.93	100.00
Aaa	41.53	66.72	-25.19	2.77	6.27	5.51	1.33	45.18
Aa1	0.04	0.03	0.02	0.00	2.53	1.66	0.00	0.08
Aa2	0.24	0.40	-0.16	0.03	12.81	11.41	-0.00	-0.08
Aa3	0.10	0.38	-0.28	0.01	7.88	7.45	0.00	0.10
A1	1.51	2.09	-0.59	0.13	8.21	8.06	-0.01	-0.39
A2	1.16	1.90	-0.74	0.10	7.76	7.61	-0.01	-0.22
A3	1.03	1.99	-0.95	0.09	8.46	7.94	-0.01	-0.18
Baa1	1.93	2.42	-0.49	0.18	8.70	8.48	-0.01	-0.22
Baa2	2.22	2.54	-0.31	0.15	6.72	6.66	0.01	0.22
Baa3	3.74	2.00	1.74	0.18	4.60	5.06	0.05	1.76
Ba1	2.98	1.79	1.19	0.15	4.89	5.46	0.03	1.14
Ba2	3.28	2.18	1.10	0.15	4.48	6.26	0.05	1.61
Ba3	5.45	2.82	2.63	0.23	4.10	5.70	0.11	3.79
B1	5.09	3.35	1.74	0.22	4.18	6.47	0.06	2.20
B2	3.91	3.66	0.25	0.15	3.79	6.85	-0.01	-0.32
B3	3.59	2.00	1.58	0.13	3.55	8.71	0.11	3.85
Caa1	1.47	0.84	0.62	0.05	3.49	10.54	0.05	1.62
Caa2	1.04	0.78	0.26	0.04	3.83	13.50	0.03	0.93
Caa3	0.37	0.11	0.26	0.01	2.21	20.50	0.03	1.17
Ca	0.10	0.08	0.02	0.00	3.83	22.22	0.00	0.13
C	0.02	0.01	0.01	0.00	2.81	40.85	0.00	0.10
WR	0.36	0.27	0.09	0.01	1.85	5.97	0.01	0.25
NR	0.11	0.01	0.10	-0.01	24.08	17.70	0.02	0.53
Not Rated	18.73	1.62	17.11	0.40	3.82	5.41	1.08	36.76



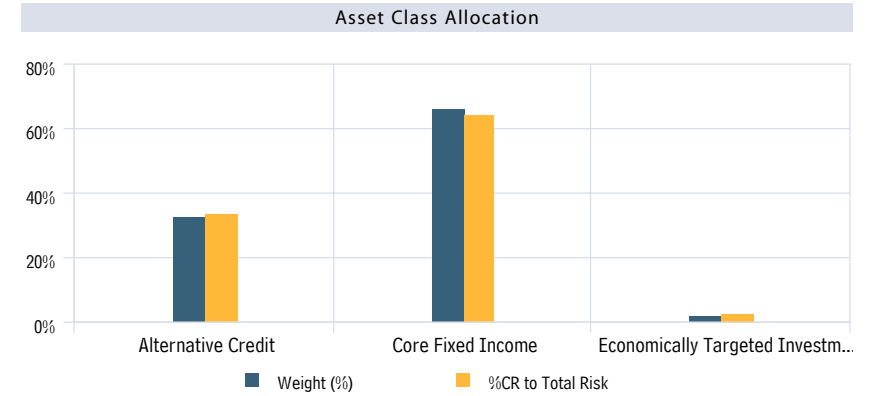
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Public FI
BENCHMARK: Public
POSITIONS: 3,723
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,204,042,205
ACCEPTED: 3,680

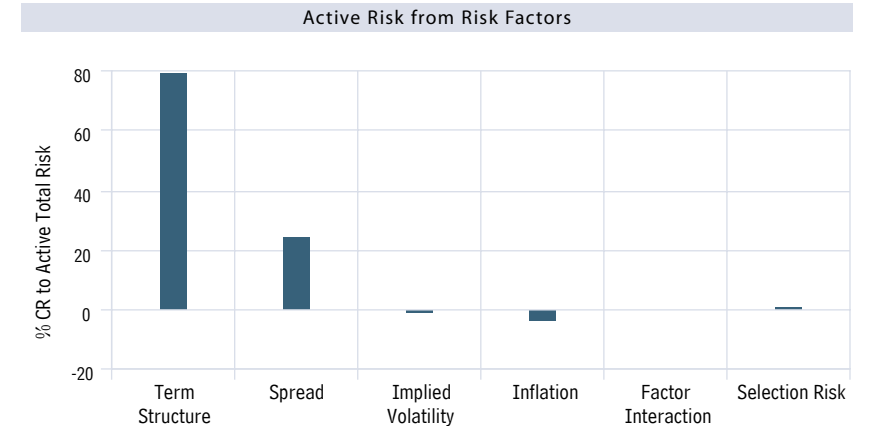
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	5.10	Total	2,204,042,205	100.00	5.10	5.10	100.00
Benchmark Risk	6.57	Alternative Credit	714,661,708	32.43	6.56	1.72	33.64
Active Risk	2.29	Core Fixed Income	1,450,144,369	65.79	5.28	3.26	63.94
Portfolio Beta	0.74	Economically Targeted Investments	39,236,129	1.78	7.81	0.12	2.42
Cont. to Eff. Duration	5.38						
Convexity	0.49						
Yield to Worst (%)	5.46						
OAS to Swap (bp)	150.01						



Risk Factor Breakdown

Risk Decomposition						
Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	5.10	100.00	1.00	2.29	100.00	1.00
Local Market Risk	5.10	100.00	1.00	2.29	100.00	1.00
Common Factor Risk	5.10	99.87	1.00	2.28	99.58	1.00
Implied Volatility	0.10	1.94	0.57	-0.01	-0.27	-0.07
Inflation	0.07	1.44	0.11	-0.08	-3.55	-0.46
Spread	0.94	18.46	0.37	0.55	23.97	0.58
Term Structure	3.98	78.05	0.81	1.81	79.16	0.91
Selection Risk	0.01	0.13	0.04	0.01	0.41	0.06



BarraOne Fixed Income Summary

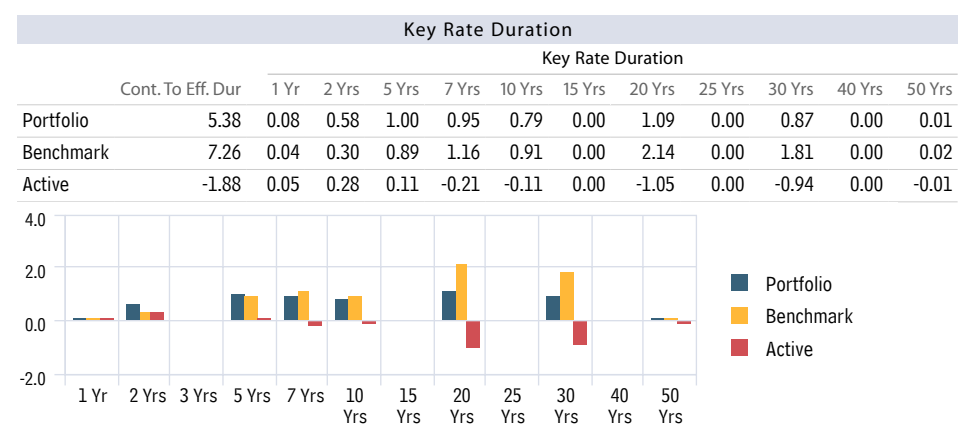
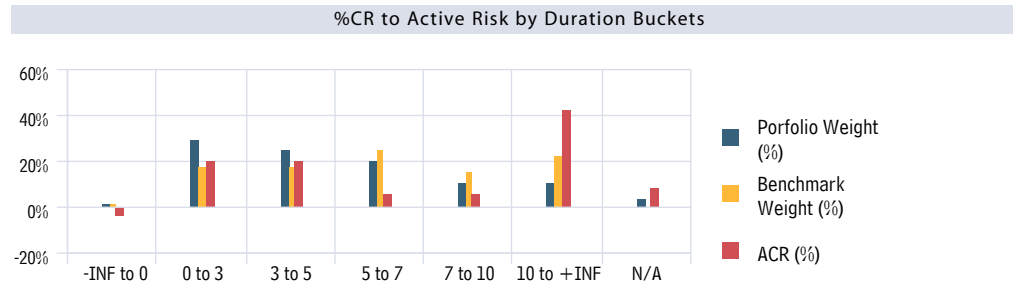
COMPANY: NYCRS - BERS
PORTFOLIO: Public FI
BENCHMARK: Public
POSITIONS: 3,723
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,204,042,205
ACCEPTED: 3,680

Portfolio by Factor Breakdowns

Top 10 Spread Factor									
Spread Factor	Volatility	Exposure (Residual)				Correlation	Contribution (Residual)		
		Portfolio	Benchmark	Active	MCAR		to TR	to AR	to AR%
US Consumer Discretionary HY S	46.59	1.42	0.56	0.86	0.25	0.53	0.24	0.21	9.29
US Energy HY Spread	47.24	0.48	0.22	0.26	0.28	0.59	0.06	0.07	3.11
US Financials HY Spread	38.69	0.52	0.26	0.25	0.21	0.54	0.05	0.05	2.30
US Materials HY Spread	46.61	0.32	0.12	0.19	0.27	0.57	0.04	0.05	2.26
US Industrials HY Spread	44.78	0.42	0.22	0.20	0.25	0.57	0.05	0.05	2.19
US Health Care HY Spread	45.18	0.34	0.13	0.22	0.23	0.50	0.05	0.05	2.16
US Telecoms HY Spread	44.28	0.20	0.10	0.11	0.23	0.51	0.03	0.02	1.04
CA Corporate HY Spread	37.61	0.22	0.10	0.12	0.17	0.46	-0.01	0.02	0.91
US Information Technology HY S	49.04	0.14	0.07	0.06	0.25	0.50	0.02	0.02	0.69
US Financials - Banking HY Spr	46.29	0.09	0.03	0.06	0.23	0.50	0.01	0.01	0.60

Top 10 Term Structure									
Term Structure	Volatility	Exposure (Residual)				Correlation	Contribution (Residual)		
		Portfolio	Benchmark	Active	MCAR		to TR	to AR	to AR%
USD Rate 20Y	0.92	1.04	2.14	-1.10	-0.01	-0.92	0.73	0.92	40.37
USD Rate 30Y	0.90	0.84	1.81	-0.98	-0.01	-0.90	0.58	0.79	34.40
USD Rate 10Y	1.05	1.13	1.37	-0.24	-0.01	-0.88	0.96	0.22	9.77
USD Rate 5Y	1.07	1.51	1.58	-0.08	-0.01	-0.79	1.25	0.06	2.76
USD Rate 50Y	0.90	0.01	0.02	-0.01	-0.01	-0.90	0.00	0.01	0.46
USD Muni Rates 1Y	1.04	0.00	0.00	0.00	-0.00	-0.21	0.00	-0.00	-0.00
USD Muni Rates 2Y	1.09	0.00	0.00	0.00	-0.00	-0.23	0.00	-0.00	-0.00
USD Muni Rates 5Y	1.10	0.00	0.00	0.00	-0.00	-0.28	0.00	-0.00	-0.01
USD Rate 1M	1.04	0.01	0.00	0.00	-0.00	-0.24	0.00	-0.00	-0.02
USD Muni Rates 10Y	1.07	0.00	0.00	0.00	-0.00	-0.39	0.00	-0.00	-0.05



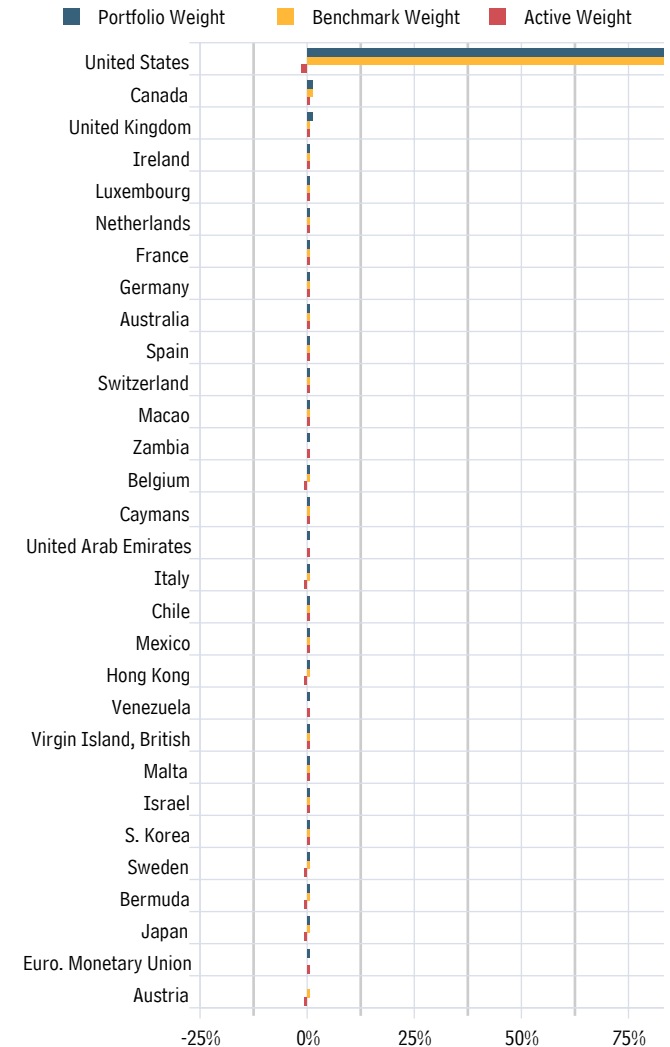
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Public FI
BENCHMARK: Public
POSITIONS: 3,723
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,204,042,205
ACCEPTED: 3,680

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	5.10	2.29	100.00	0.02
United States	93.95	94.95	-1.01	5.14	2.21	96.43	-0.04
Canada	1.39	1.22	0.18	6.73	0.01	0.42	-0.02
United Kingdom	1.03	0.87	0.16	5.15	0.01	0.45	-0.02
Ireland	0.48	0.28	0.20	6.58	0.01	0.50	-0.01
Luxembourg	0.43	0.40	0.03	9.10	0.00	0.07	-0.00
Netherlands	0.41	0.33	0.08	9.66	0.01	0.22	-0.02
France	0.30	0.19	0.11	7.55	0.01	0.29	-0.01
Germany	0.27	0.11	0.16	9.99	0.01	0.33	-0.00
Australia	0.25	0.16	0.09	6.13	0.01	0.23	-0.02
Spain	0.20	0.09	0.11	5.09	0.01	0.22	-0.02
Switzerland	0.19	0.10	0.08	9.30	0.01	0.24	-0.02
Macao	0.12	0.05	0.07	10.08	0.00	0.13	-0.00
Zambia	0.11	0.00	0.11	3.68	0.01	0.28	0.01
Belgium	0.11	0.12	-0.02	14.35	-0.00	-0.03	-0.07
Caymans	0.11	0.07	0.04	10.07	0.00	0.10	0.01
United Arab Emirates	0.10	0.00	0.10	7.60	0.01	0.26	0.01
Italy	0.10	0.14	-0.04	14.24	-0.00	-0.00	0.00
Chile	0.10	0.01	0.08	2.25	0.00	0.16	-0.01
Mexico	0.07	0.05	0.02	4.93	0.00	0.11	-0.04
Hong Kong	0.07	0.13	-0.06	12.62	-0.00	-0.08	-0.03
Venezuela	0.06	0.00	0.06	2.41	0.00	0.14	0.01
Virgin Island, British	0.04	0.02	0.02	10.79	0.00	0.03	-0.01
Malta	0.02	0.01	0.01	14.59	0.00	0.03	0.02
Israel	0.02	0.01	0.01	11.33	0.00	0.05	-0.00
S. Korea	0.02	0.01	0.01	3.76	0.00	0.02	-0.02
Sweden	0.01	0.02	-0.00	2.94	-0.00	-0.01	0.00
Bermuda	0.01	0.02	-0.01	7.74	0.00	0.01	-0.01
Japan	0.01	0.31	-0.30	14.35	-0.01	-0.27	-0.03
Euro. Monetary Union	0.00	0.00	0.00	7.77	0.00	0.00	-0.00
Austria	0.00	0.01	-0.01	0.00	-0.00	-0.01	-0.02

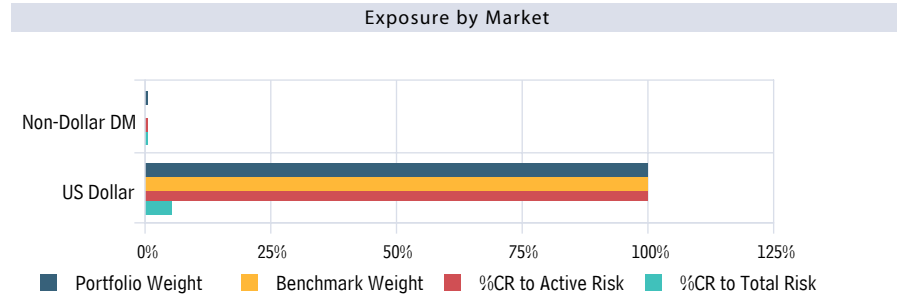


BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Public FI
BENCHMARK: Public
POSITIONS: 3,723
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,204,042,205
ACCEPTED: 3,680

Portfolio Allocation by Currency



Developed Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	2,203,971,735.23	99.98	100.00
British Pound Sterling	65,726.44	0.02	0.00
Euro	4,743.81	0.00	0.00

Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)

Top 15 Currencies by Weight%								
Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	5.10	5.10	100.00	2.29	100.00
US Dollar	100.00	100.00	-0.00	5.10	5.10	100.00	2.29	99.98
British Pound Sterling	0.00	0.00	0.00	58.91	0.00	0.00	0.00	0.02
Euro	0.00	0.00	0.00	7.77	0.00	0.00	0.00	0.00

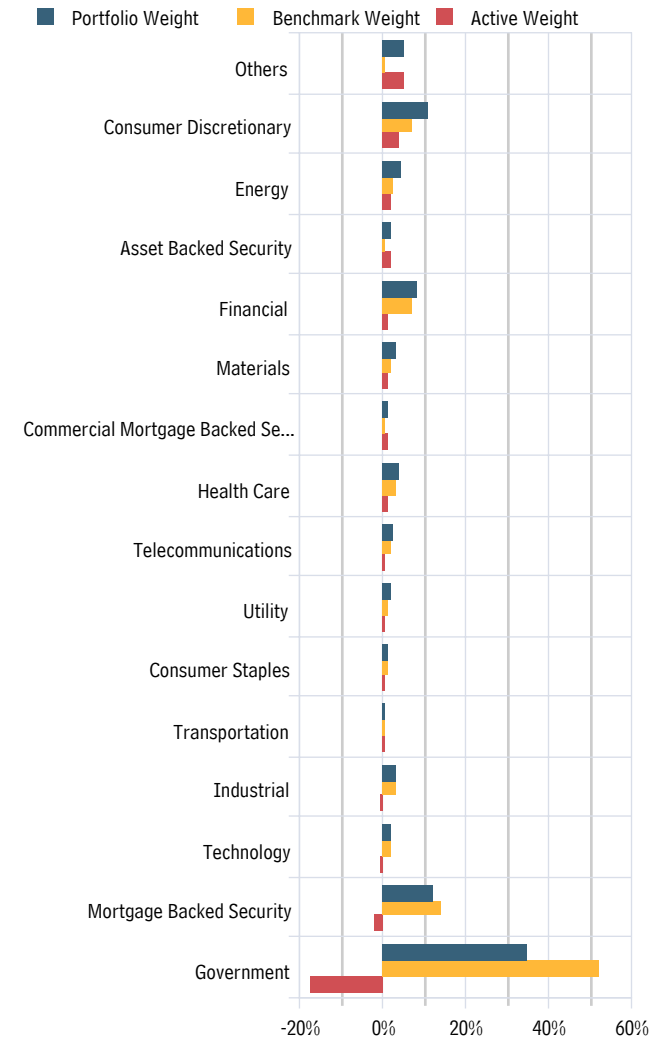
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Public FI
BENCHMARK: Public
POSITIONS: 3,723
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,204,042,205
ACCEPTED: 3,680

Portfolio Allocation by Bond Sector

Sector	Weight (%)			Cont. To Eff. Dur	Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	5.38	5.10	2.29	100.00	0.02
Government	35.08	52.54	-17.46	2.23	5.28	1.42	62.02	-0.06
Mortgage Backed Security	12.28	14.22	-1.94	0.80	6.83	-0.04	-1.60	-0.05
Consumer Discretionary	11.10	7.06	4.04	0.52	7.61	0.20	8.79	-0.00
Financial	8.62	7.13	1.49	0.45	5.90	0.04	1.65	-0.02
Others	4.91	0.00	4.91	0.01	0.30	0.24	10.40	-0.00
Energy	4.54	2.58	1.97	0.18	6.12	0.14	6.13	-0.00
Health Care	4.04	2.93	1.11	0.25	7.45	0.04	1.90	-0.03
Industrial	3.46	3.51	-0.05	0.14	6.43	0.01	0.54	-0.00
Materials	3.21	1.77	1.44	0.13	6.61	0.09	3.78	0.00
Telecommunications	2.72	2.06	0.66	0.15	7.36	0.01	0.61	-0.02
Utility	2.07	1.55	0.52	0.12	5.73	0.03	1.46	-0.04
Technology	1.74	1.89	-0.15	0.11	7.05	0.02	0.71	-0.03
Asset Backed Security	1.71	0.08	1.63	0.07	4.08	0.03	1.45	-0.03
Consumer Staples	1.60	1.40	0.20	0.10	6.56	0.02	0.66	-0.03
Commercial Mortgage Backed	1.34	0.06	1.28	0.04	2.91	0.04	1.71	-0.02
Transportation	0.90	0.88	0.02	0.04	5.82	0.01	0.30	-0.02
Agency	0.44	0.12	0.33	0.03	6.79	-0.00	-0.18	-0.05
Local/Provincial	0.25	0.08	0.16	0.03	8.94	-0.01	-0.23	-0.06



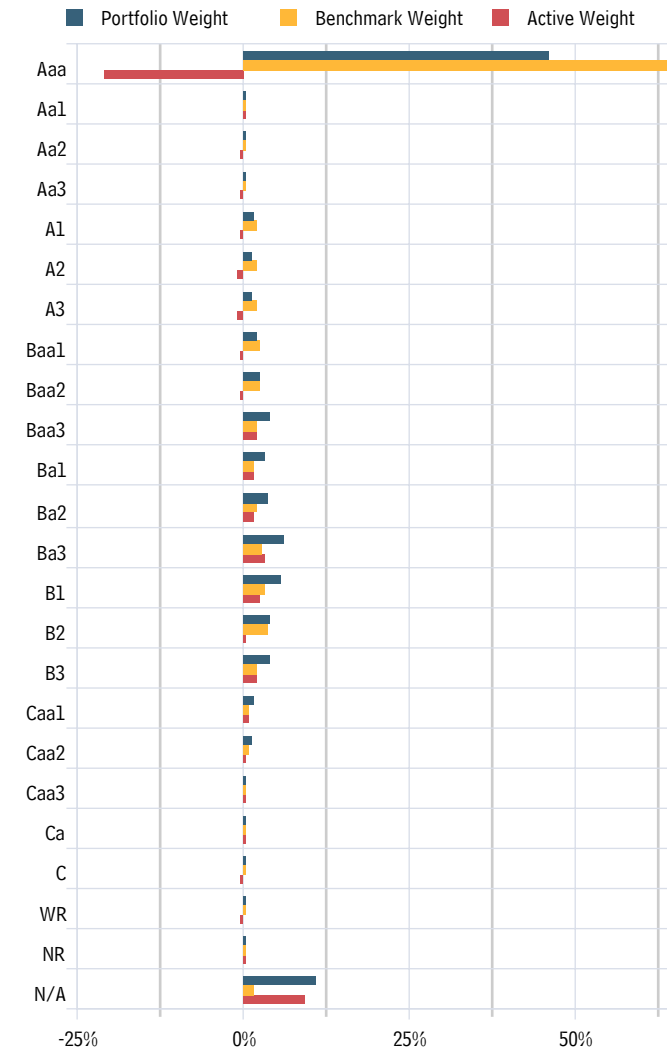
BarraOne Fixed Income Summary

COMPANY: NYCRS - BERS
PORTFOLIO: Public FI
BENCHMARK: Public
POSITIONS: 3,723
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 2,204,042,205
ACCEPTED: 3,680

Portfolio Allocation by Moody's Rating

Rating	Weight (%)			Cont. To Eff. Dur	Spread Duration	Total Risk	Active Risk CR	%CR to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	5.38	5.59	5.10	2.29	100.00
Aaa	45.95	66.72	-20.78	2.92	6.27	5.51	1.39	60.80
Aa1	0.05	0.03	0.02	0.00	2.53	1.66	0.00	0.12
Aa2	0.26	0.40	-0.14	0.03	12.81	11.41	-0.00	-0.16
Aa3	0.11	0.38	-0.27	0.01	7.88	7.45	0.00	0.13
A1	1.67	2.09	-0.43	0.14	8.21	8.06	-0.01	-0.63
A2	1.29	1.90	-0.61	0.10	7.76	7.61	-0.01	-0.35
A3	1.14	1.99	-0.84	0.10	8.46	7.94	-0.01	-0.27
Baa1	2.14	2.42	-0.29	0.19	8.70	8.48	-0.01	-0.34
Baa2	2.45	2.54	-0.08	0.16	6.70	6.64	0.01	0.47
Baa3	4.12	2.00	2.11	0.19	4.56	5.02	0.07	2.91
Ba1	3.28	1.79	1.49	0.16	4.88	5.45	0.05	2.01
Ba2	3.63	2.18	1.45	0.16	4.48	6.26	0.06	2.72
Ba3	6.02	2.82	3.19	0.24	4.10	5.68	0.14	6.00
B1	5.61	3.35	2.26	0.23	4.17	6.46	0.09	3.85
B2	4.23	3.66	0.57	0.16	3.82	6.87	0.01	0.32
B3	3.87	2.00	1.87	0.14	3.59	8.81	0.13	5.73
Caa1	1.58	0.84	0.74	0.06	3.54	10.59	0.06	2.44
Caa2	1.06	0.78	0.29	0.04	3.95	13.49	0.03	1.13
Caa3	0.19	0.11	0.08	0.00	2.58	19.19	0.01	0.42
Ca	0.11	0.08	0.04	0.00	3.83	22.22	0.01	0.23
C	0.01	0.01	-0.00	0.00	3.73	47.25	-0.00	-0.00
WR	0.23	0.27	-0.04	0.01	2.47	7.72	-0.00	-0.00
NR	0.01	0.01	0.00	0.00	4.47	4.70	0.00	0.00
Not Rated	10.99	1.62	9.37	0.35	4.98	3.06	0.29	12.49



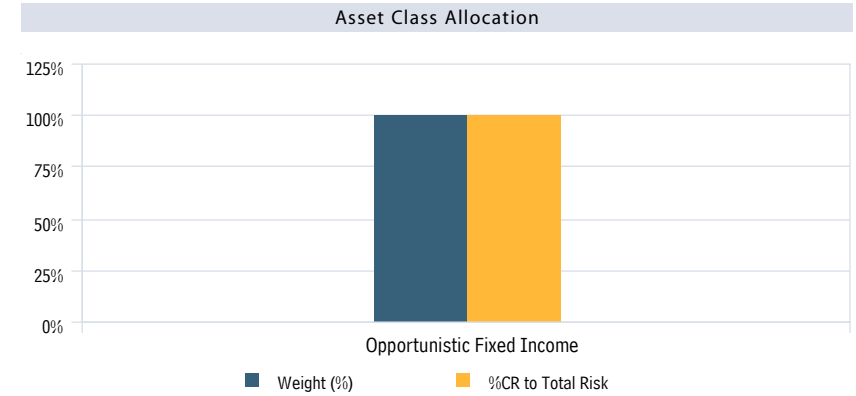
BarraOne Fixed Income Summary

COMPANY: NYCRC - BERS
PORTFOLIO: Alternative FI
BENCHMARK: 50_HY-50_LEVLOAN, BB U.S. Corp HY/CS Lvgd Loan
POSITIONS: 11
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 234,393,140
ACCEPTED: 11

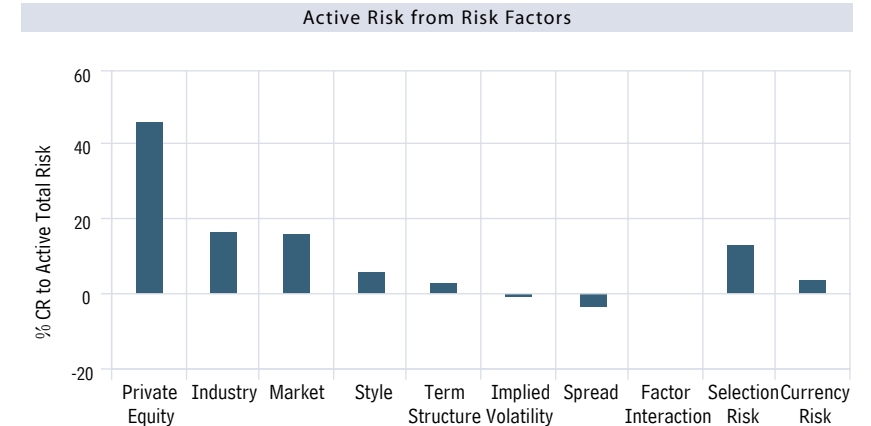
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	10.12	Total	234,393,140	100.00	10.12	10.12	100.00
Benchmark Risk	5.39	Opportunistic Fixed Income	234,393,140	100.00	10.12	10.12	100.00
Active Risk	7.18						
Portfolio Beta	1.37						
Cont. to Eff. Duration	1.63						
Convexity	0.10						
Yield to Worst (%)	8.65						
OAS to Swap (bp)	704.81						



Risk Factor Breakdown

Risk Decomposition						
Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	10.12	100.00	1.00	7.18	100.00	1.00
Local Market Risk	9.70	95.83	1.00	6.91	96.22	0.99
Common Factor Risk	9.03	89.20	0.96	5.96	82.99	0.92
Implied Volatility	0.01	0.11	0.36	-0.01	-0.18	-0.11
Industry	0.96	9.46	0.35	1.17	16.26	0.42
Market	1.75	17.27	0.69	1.13	15.70	0.44
Private Equity	2.37	23.40	0.48	3.34	46.46	0.68
Spread	3.44	34.02	0.74	-0.28	-3.83	-0.24
Style	0.54	5.34	0.44	0.40	5.59	0.32
Term Structure	-0.04	-0.40	-0.04	0.22	3.03	0.20
Selection Risk	0.67	6.62	0.26	0.95	13.23	0.36
Currency Risk	0.42	4.17	0.43	0.27	3.78	0.28



BarraOne Fixed Income Summary

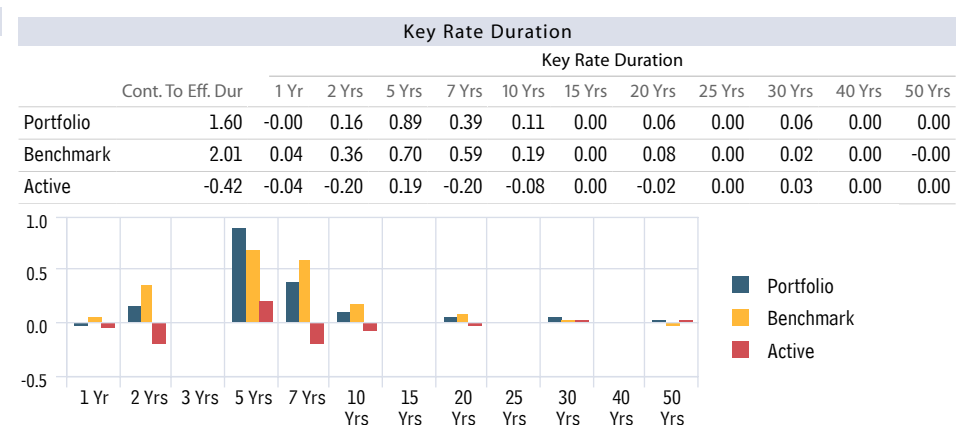
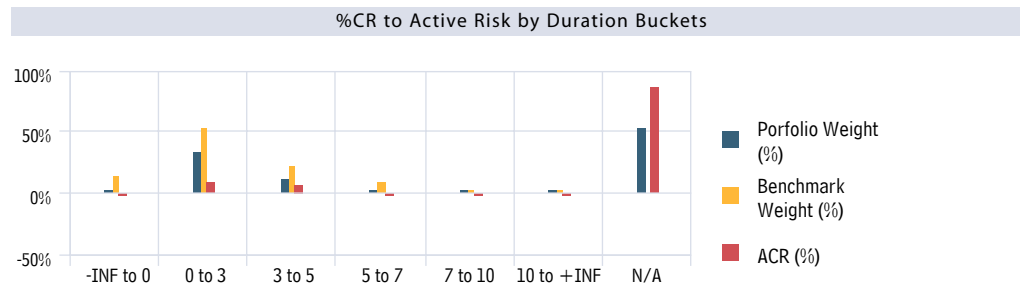
COMPANY: NYCRC - BERS
PORTFOLIO: Alternative FI
BENCHMARK: 50_HY-50_LEVLOAN, BB U.S. Corp HY/CS Lvgd Loan
POSITIONS: 11
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 234,393,140
ACCEPTED: 11

Portfolio by Factor Breakdowns

Top 10 Spread Factor									
Spread Factor	Volatility	Exposure (Residual)				Correlation	Contribution (Residual)		
		Portfolio	Benchmark	Active	MCAR	Active Port	to TR	to AR	to AR%
EU Consumer Discretionary Spre	52.25	2.22	0.03	2.19	0.16	0.32	0.72	0.36	5.02
US Corporate HY Spread	41.67	1.21	0.00	1.21	0.15	0.36	0.36	0.18	2.50
US HY Steepener	30.38	0.14	-0.15	0.29	0.07	0.24	0.02	0.02	0.29
EM Europe Spread	54.52	0.09	0.00	0.09	0.17	0.31	0.03	0.01	0.21
NL Corporate Spread	5.54	0.91	0.07	0.83	0.01	0.16	0.01	0.01	0.10
EM Brazil Corporate Spread DTS	57.74	0.04	0.00	0.04	0.16	0.28	0.01	0.01	0.09
EU Corporate HY Spread	44.64	0.03	0.00	0.03	0.14	0.31	0.01	0.00	0.06
EU Health Care Spread	49.92	0.06	0.04	0.02	0.15	0.30	0.02	0.00	0.05
US Health Care - Equipment & S	42.90	0.03	0.00	0.03	0.12	0.29	0.01	0.00	0.04
EM Mexico Corporate Spread DTS	40.76	0.02	0.00	0.02	0.13	0.32	0.01	0.00	0.04

Top 10 Term Structure									
Term Structure	Volatility	Exposure (Residual)				Correlation	Contribution (Residual)		
		Portfolio	Benchmark	Active	MCAR	Active Port	to TR	to AR	to AR%
USD Rate 5Y	1.07	0.42	1.05	-0.64	-0.00	-0.19	-0.03	0.13	1.81
USD Rate 10Y	1.05	0.13	0.43	-0.29	-0.00	-0.18	-0.01	0.05	0.76
USD Rate 2Y	1.06	0.12	0.36	-0.24	-0.00	-0.18	-0.01	0.05	0.63
USD Rate 20Y	0.92	0.04	0.08	-0.04	-0.00	-0.19	-0.00	0.01	0.10
USD Rate 6M	0.98	-0.05	0.01	-0.05	-0.00	-0.11	0.00	0.01	0.08
USD Rate 1Y	1.06	0.00	0.04	-0.04	-0.00	-0.13	-0.00	0.01	0.07
USD Rate 1M	1.04	0.02	0.02	-0.00	-0.00	-0.10	-0.00	0.00	0.00
EUR Rate 1Y	0.83	-0.00	0.00	-0.00	-0.00	-0.08	-0.00	0.00	0.00
GBP Rate 2Y	1.47	-0.00	0.00	-0.00	-0.00	-0.02	-0.00	0.00	0.00
GBP Rate 6M	1.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00



BarraOne Fixed Income Summary

COMPANY: NYCRC - BERS
PORTFOLIO: Alternative FI
BENCHMARK: 50_HY-50_LEVLOAN, BB U.S. Corp HY/CS Lvgd Loan
POSITIONS: 11
MODEL: MAC.I

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 234,393,140
ACCEPTED: 11

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	10.12	7.18	100.00	0.07
United States	83.39	86.37	-2.97	9.76	6.06	84.41	0.05
N/A	5.63	0.00	5.63	18.74	0.40	5.56	0.09
Germany	3.63	0.46	3.17	32.21	0.38	5.31	0.11
Netherlands	3.11	1.04	2.07	23.88	0.20	2.81	0.06
United Kingdom	3.06	1.75	1.31	10.28	0.06	0.80	0.02
Luxembourg	1.28	2.08	-0.80	5.19	-0.00	-0.01	0.01
Canada	0.85	3.51	-2.66	9.24	0.02	0.31	0.01
Bermuda	0.30	0.06	0.24	6.81	-0.00	-0.01	0.01
Ireland	0.13	1.08	-0.95	22.36	0.01	0.15	0.01
Ukraine	0.11	0.00	0.11	52.41	0.02	0.21	0.15
Brazil	0.10	0.00	0.10	28.51	0.01	0.07	0.07
France	0.07	0.60	-0.52	17.41	-0.00	-0.00	0.02
Mexico	0.05	0.00	0.05	17.38	0.00	0.01	0.04
Singapore	0.03	0.06	-0.03	1.68	0.00	0.01	-0.00
Austria	0.03	0.01	0.01	16.40	0.00	0.01	0.03
India	0.02	0.02	-0.00	6.19	-0.00	-0.00	0.01
Caymans	0.01	0.35	-0.33	6.86	0.00	0.00	0.01
Norway	0.01	0.04	-0.04	13.34	0.00	0.01	0.01
Venezuela	0.00	0.00	0.00	11.84	0.00	0.00	0.02
Australia	0.00	0.36	-0.36	10.88	0.00	0.06	0.00
Panama	0.00	0.14	-0.14	4.41	0.00	0.01	0.01
Jersey	0.00	0.01	-0.01	11.47	-0.00	-0.00	0.04
Iceland	0.00	0.00	0.00	17.45	0.00	0.00	0.04
United Arab Emirates	0.00	0.00	0.00	0.05	-0.00	-0.00	0.00
Barbados	0.00	0.02	-0.02	0.00	0.00	0.00	0.01
Denmark	0.00	0.01	-0.01	0.00	-0.00	-0.00	0.02
Spain	0.00	0.04	-0.04	0.00	-0.00	-0.00	0.02
Finland	0.00	0.07	-0.07	0.00	0.00	0.00	0.01
Hong Kong	0.00	0.50	-0.50	0.00	0.01	0.14	-0.00
Israel	0.00	0.02	-0.02	0.00	-0.00	-0.00	0.02

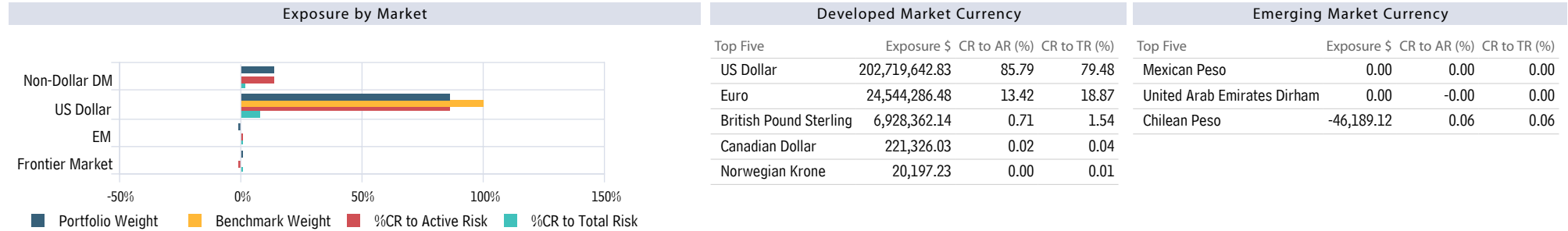


BarraOne Fixed Income Summary

COMPANY: NYCRC - BERS
PORTFOLIO: Alternative FI
BENCHMARK: 50_HY-50_LEVLOAN, BB U.S. Corp HY/CS Lvgd Loan
POSITIONS: 11
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 234,393,140
ACCEPTED: 11

Portfolio Allocation by Currency



Top 15 Currencies by Weight%								
Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	10.12	10.12	100.00	7.18	100.00
US Dollar	86.49	100.00	-13.51	9.58	8.04	79.48	6.16	85.79
Euro	10.47	0.00	10.47	25.24	1.91	18.87	0.96	13.42
British Pound Sterling	2.96	0.00	2.96	10.59	0.16	1.54	0.05	0.71
Canadian Dollar	0.09	0.00	0.09	7.01	0.00	0.04	0.00	0.02
Norwegian Krone	0.01	0.00	0.01	13.34	0.00	0.01	0.00	0.00
Australian Dollar	0.00	0.00	0.00	10.88	0.00	0.00	0.00	0.00
Singapore Dollar	0.00	0.00	0.00	4.79	0.00	0.00	-0.00	-0.00
Mexican Peso	0.00	0.00	0.00	11.83	0.00	0.00	0.00	0.00
United Arab Emirates Dirham	0.00	0.00	0.00	0.05	0.00	0.00	-0.00	-0.00
Swiss Franc	-0.00	0.00	-0.00	8.09	-0.00	-0.00	0.00	0.00
Swedish Krona	-0.00	0.00	-0.00	11.24	-0.00	-0.00	-0.00	-0.00
Japanese Yen	-0.00	0.00	-0.00	9.56	-0.00	-0.00	0.00	0.00
Chilean Peso	-0.02	0.00	-0.02	303.08	0.01	0.06	0.00	0.06

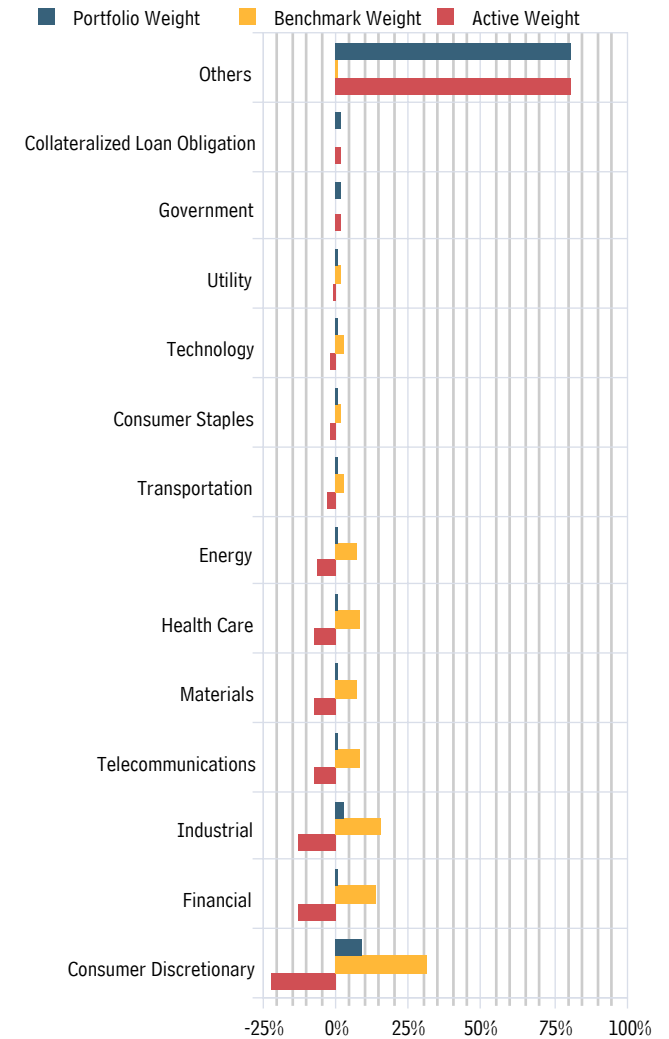
BarraOne Fixed Income Summary

COMPANY: NYCRC - BERS
PORTFOLIO: Alternative FI
BENCHMARK: 50_HY-50_LEVLOAN, BB U.S. Corp HY/CS Lvgd Loan
POSITIONS: 11
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: December 31, 2022
MARKET VALUE: 234,393,140
ACCEPTED: 11

Portfolio Allocation by Bond Sector

Sector	Weight (%)			Cont. To Eff. Dur	Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	1.60	10.12	7.18	100.00	0.07
Others	80.53	0.00	80.53	0.55	10.17	6.32	88.07	0.07
Consumer Discretionary	8.79	31.09	-22.30	0.64	22.49	0.60	8.42	0.03
Industrial	2.56	15.29	-12.73	0.11	22.51	0.11	1.50	0.02
Collateralized Loan Obligat	1.55	0.00	1.55	-0.15	17.11	0.06	0.81	0.05
Government	1.45	0.00	1.45	0.22	7.42	-0.04	-0.59	-0.01
Health Care	1.27	8.27	-7.00	0.05	11.00	0.03	0.39	0.02
Technology	0.98	2.37	-1.39	0.05	28.68	0.08	1.15	0.04
Utility	0.81	2.12	-1.30	0.03	2.15	-0.00	-0.04	0.01
Energy	0.75	7.09	-6.34	0.04	6.05	-0.00	-0.03	0.02
Financial	0.56	13.51	-12.96	0.02	7.66	-0.01	-0.13	0.02
Telecommunications	0.35	7.85	-7.51	0.02	12.53	0.02	0.23	0.02
Transportation	0.13	2.97	-2.84	0.01	11.68	-0.00	-0.05	0.02
Sovereign	0.11	0.00	0.11	0.01	50.81	0.02	0.21	0.15
Asset Backed Security	0.07	0.00	0.07	0.00	8.36	-0.00	-0.00	0.01
Consumer Staples	0.07	2.24	-2.17	0.01	14.12	0.01	0.17	0.01
Local/Provincial	0.01	0.11	-0.10	0.00	8.53	0.00	0.02	0.00
Materials	0.01	7.07	-7.07	-0.00	20.04	-0.01	-0.14	0.02



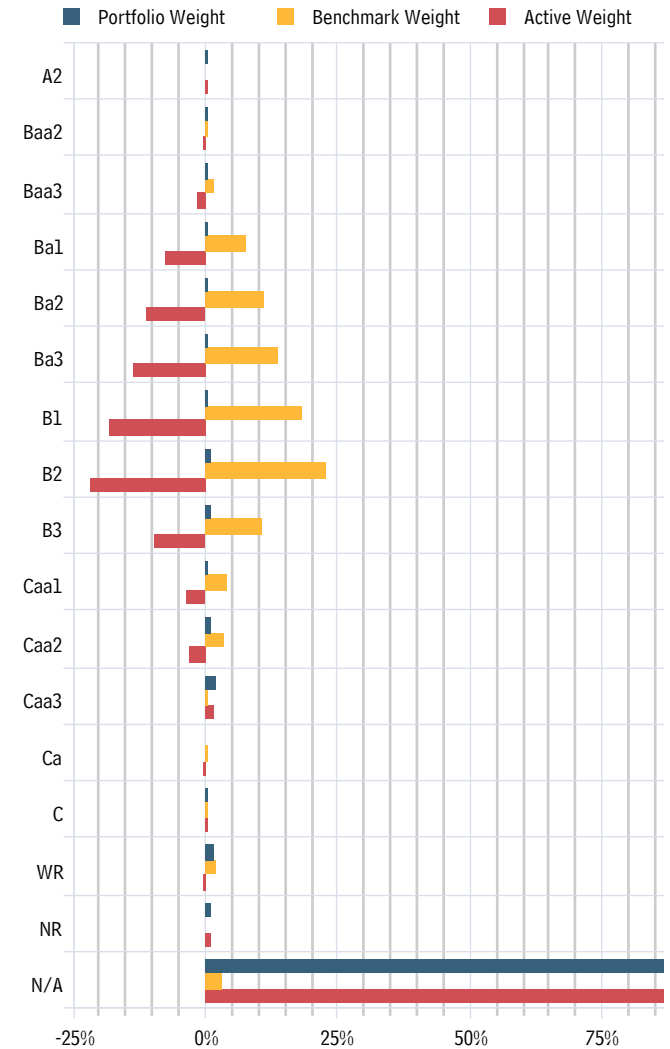
BarraOne Fixed Income Summary

COMPANY: NYCRC - BERS
 PORTFOLIO: Alternative FI
 BENCHMARK: 50_HY-50_LEVLOAN, BB U.S. Corp HY/CS Lvgd Loan
 POSITIONS: 11
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: December 31, 2022
 MARKET VALUE: 234,393,140
 ACCEPTED: 11

Portfolio Allocation by Moody's Rating

Rating	Weight (%)			Cont. To Eff. Dur	Spread Duration	Total Risk	Active Risk CR	%CR to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	1.60	2.44	10.12	7.18	100.00
A2	0.00	0.00	0.00	-0.00	3.69	10.10	0.00	0.00
Baa2	0.06	0.26	-0.21	0.02	15.07	19.58	0.01	0.07
Baa3	0.25	1.67	-1.42	0.05	10.38	13.10	0.01	0.16
Ba1	0.14	7.64	-7.50	0.02	8.24	10.47	0.04	0.62
Ba2	0.01	11.15	-11.14	0.00	1.89	6.86	0.05	0.76
Ba3	0.16	13.71	-13.55	0.01	4.44	11.71	0.06	0.88
B1	0.20	18.40	-18.19	0.02	4.77	10.34	0.04	0.59
B2	0.85	22.65	-21.80	0.04	2.61	6.81	-0.00	-0.05
B3	0.90	10.60	-9.70	0.02	2.03	5.52	-0.04	-0.59
Caa1	0.35	4.11	-3.75	0.01	1.27	12.50	-0.06	-0.80
Caa2	0.84	3.76	-2.92	0.04	2.41	19.55	-0.06	-0.77
Caa3	2.05	0.56	1.49	0.08	1.89	27.21	0.09	1.25
Ca	0.00	0.38	-0.38	0.00	0.00	0.00	-0.01	-0.14
C	0.18	0.07	0.11	0.01	2.46	42.19	0.01	0.15
WR	1.54	1.92	-0.37	0.03	0.97	4.38	0.01	0.07
NR	1.01	0.00	1.01	-0.17	25.64	19.22	0.04	0.56
Not Rated	91.45	3.13	88.32	1.42	1.83	10.38	6.98	97.24



APPENDICES:

- Basket Clause
- Liquidity Analysis

BASKET CLAUSE ANALYSIS

Trustee Reporting
As of 12/31/2022

Basket Limit	35.00%
Basket Consumed	23.26%
Remaining Capacity	11.74%

	Basket-Eligible Assets*				
	Non-Basket Assets	Non-Contributing	Contributing	Basket Assets	Total
FIXED INCOME	23.41%	6.16%	0.00%	4.86%	34.43%
U.S. Fixed	11.95%	5.84%	0.00%	4.65%	22.44%
Cash/Equivalent	5.89%	---	---	---	5.89%
TIPS	3.35%	---	---	---	3.35%
OFI	---	---	---	2.82%	2.82%
High Yield	1.00%	5.77%	0.00%	1.81%	8.59%
Bank Loans	0.00%	---	---	0.00%	0.00%
ETI Investments	0.46%	---	---	0.01%	0.47%
Core/Core Plus	1.25%	0.06%	---	0.02%	1.33%
U.S. Structured	11.46%	0.32%	---	0.21%	11.99%
Credit	2.70%	0.32%	---	0.08%	3.10%
Mortgages	3.36%	---	---	0.13%	3.49%
ST Treasury	1.78%	---	---	---	1.78%
Treasury/Agency	0.87%	---	---	---	0.87%
MT Treasury	2.17%	---	---	---	2.17%
LT Treasury	0.59%	---	---	---	0.59%
EQUITY	27.18%	20.00%	7.20%	11.20%	65.57%
Public Equity	27.18%	10.00%	5.22%	0.02%	42.41%
U.S. Equity	25.77%	0.97%	0.51%	0.00%	27.26%
EAFE	0.28%	5.47%	2.85%	0.00%	8.61%
Emerging Markets	0.15%	3.17%	1.65%	0.01%	4.98%
Global	0.98%	0.39%	0.20%	0.00%	1.57%
Alternative Investments	---	10.00%	1.98%	11.18%	23.16%
Infrastructure	0.00%	2.51%	0.50%	0.00%	3.01%
Private RE/Core	0.00%	5.06%	1.00%	---	6.07%
Private RE/Non-Core	0.00%	2.43%	0.48%	0.00%	2.91%
Private Equity	0.00%	---	---	11.18%	11.18%
TOTAL ASSETS	50.58%	26.16%	7.20%	16.06%	100.00%
	Non-Basket:	76.74%	Basket:	23.26%	

This analysis shows basket consumption by investment mandate on a security look-through basis.

* Basket Eligible Assets are subject to the following thresholds - above which investment consumes basket capacity: 10% aggregate portfolio weight for investments in non-U.S. listed equities; 10% aggregate portfolio weight for real assets; and 10% aggregate portfolio weight for investments in high yield bonds and foreign debt issues that are registered with the SEC. To the extent that the value of investments in a particular category exceeds a threshold, the excess consumes basket capacity.

In the above table, the investment of cash held as collateral under the system's securities lending program, is included as a Non-Basket Asset in the Cash/Equivalent line.



AUM as of December 31, 2022

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
PUBLIC EQUITY	\$3,551	\$3,551	\$3,551	\$3,551
U.S.	2,281	2,281	2,281	2,281
EAFE Equity	671	671	671	671
Emerging Markets	468	468	468	468
Global Equity	131	131	131	131
PUBLIC FIXED INCOME	\$2,210	\$2,187	\$2,197	\$2,197
Short Term Securities	90	90	90	90
U.S. Government	452	452	452	452
Mortgages				
Core Mortgages	261	261	261	261
ETI	39	17	26	26
Credit - Investment Grade	370	370	370	370
Corporate - High Yield	718	718	718	718
Corporate - Bank Loans	0	0	0	0
UST - Inflation Protected	280	280	280	280
ALTERNATIVE ASSETS	\$2,174	\$176	\$234	\$234
Private Equity	936	0	0	0
Private Real Estate	752	0	0	0
Infrastructure	252	0	0	0
Opportunistic Fixed Income	234	176	234	234
Total Assets	\$7,935	\$5,914	\$5,982	\$5,982
Total Illiquid \$		\$2,021	\$1,953	\$1,953
Total Illiquid %		25.5%	24.6%	24.6%
Unfunded OFI Commitments	\$146			
Unfunded INF Commitments	\$225			
Unfunded PE Commitments	\$511			
Unfunded RE Commitments	\$309			
Total commitments \$	\$1,190			
Total commitments %	15.0%			



BERS Liquidity Profile - Static Analysis

AUM as of December 31, 2022

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$2,021	\$1,953	\$1,953
Total Illiquid %	38.2%	36.9%	36.9%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids



	Current MV	Liquid Assets		
		Today	1 Year	2 Years
Total Assets	\$7,935	\$5,914	\$5,982	\$5,982

Private Equity, Real Estate and Infrastructure Fixed Income Stress Case

Unfunded OFI Commitments	\$29	\$58
Unfunded INF Commitments	\$45	\$90
Unfunded PE Commitments Drawn	\$102	\$204
Unfunded RE Commitments Drawn	\$62	\$124
Total commitments \$	\$238	\$476
Total commitments %	3.0%	6.0%

Total Illiquid \$	\$2,191	\$2,429
Total Illiquid %	27.6%	30.6%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

See Assumptions Page for Full Details

**Denominator Effect - Decrease AUM by One-Third**

Total Illiquid \$	\$2,021	\$2,191	\$2,429
Total Illiquid %	38.2%	41.4%	45.9%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids



Additional Assumptions

Alternative Assets Liquidation Estimates: Private Equity, Private Real Estate, and Infrastructure: assumes no liquidations in 2-year horizon; Opportunistic Fixed Income: assumes 75% immediate availability and 100% availability within one year.

Illiquid Ratio: Illiquid investment value for each of the three time horizons as a percentage of current AUM. The ratio is calculated under three scenarios: 1) Unadjusted estimated illiquid value to current total assets. 2) Unadjusted estimated illiquid values to current total assets after a 33% decline. 3) Estimated illiquid value after Fixed Income Stress Case to current total assets after a 33% decline.

Unfunded Commitments: Uses custodian value at month end.

Denominator Effect: Measures Illiquid Ratio for each time horizon after an assumed 33% decline in portfolio value.

Fixed Income Stress Case: Measures impact of new commitments to illiquid asset classes assuming no capital calls and a level 5-year pacing schedule.

